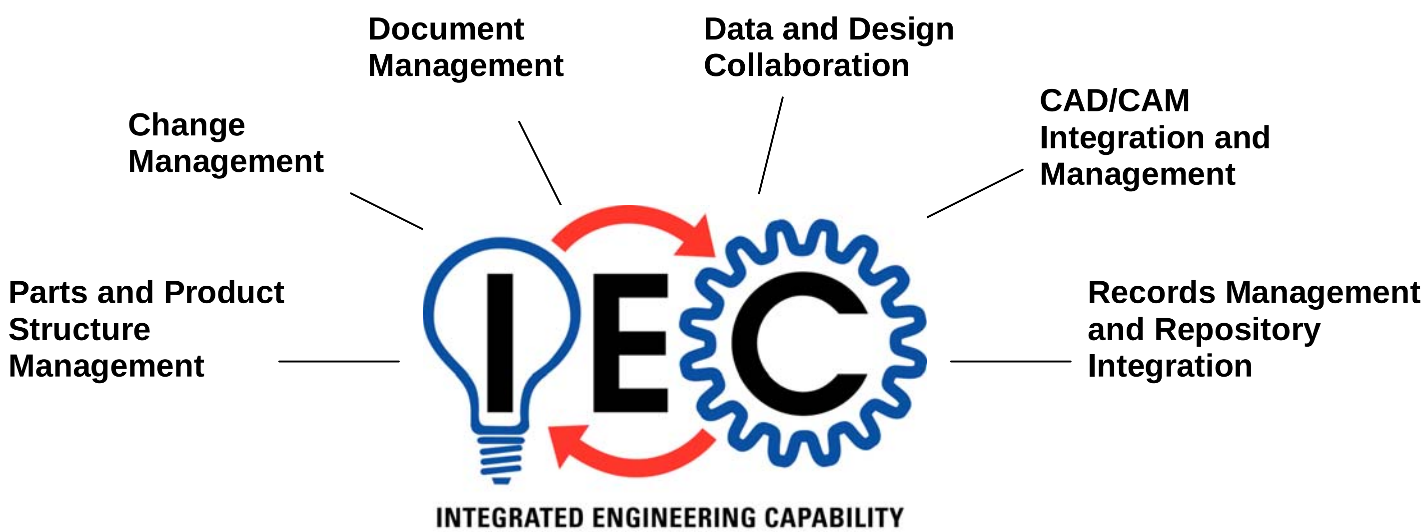
Integrated Engineering Capability (IEC)
Design and Data Management System (DDMS)
User's Guide

The mission of the Integrated Engineering Capability Project is to improve the accuracy, integrity, availability, and control of engineering data through establishment of data automation and integration capabilities based on MSFC policies and processes.



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"Engineering Excellence enabling our customers' mission success"

DOCUMENT HISTORY LOG

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Module 2. Overview

2.1 Objectives

Upon completion of this module, the user should be able to:

- Define what IEC DDMS is and how it can benefit your Project
- Define the workflows and lifecycles of the Document and Change Management processes within DDMS and the tasks associated with those workflows
- Define the various user roles in the Document and Change Management processes
- Define the document types involved with the Document Management Process
- Define the object types involved with the Change Management Process

2.2 Document and Change Management

DDMS provides an environment for improved document management facilitating the capability of productive document collaboration between locally and geographically dispersed teams. DDMS is capable of automating approval routing, sensitive data control, and records management.

Change Management at MSFC has been a forms-driven process. Over the years, original paper forms were eventually “computerized” to the extent that data could be entered electronically onto a Microsoft Word or Informed form; however, for the most part, the data was not captured in a relational database and a paper copy of the form was maintained as the official record. IEC DDMS will automate the Change Management process which will electronically capture data that is entered on current paper forms, combine related functions that are currently accomplished by multiple forms, capture useful data that is not currently on Change Management forms, eliminate the capture of data that is not currently used, standardize form field names and terminology, and eliminate redundant data entry.

This training guide is designed to help individual users who play certain roles in the Document and Change Management workflows.

2.2.1 IEC DDMS Document Lifecycle, Tasks, and Users

An IEC DDMS team is a set of members representing users and groups from one or more organizations that have been given access to a project. Certain user roles have been assigned to a particular individual designated by the DDMS Program/Project to perform that role in the automated CDM process.

The following table describes the lifecycle of a document once it is created in DDMS. The table also shows the individual tasks associated with each state of the lifecycle and the user that is responsible for completing each of those tasks. Module 4 of this User’s Guide provides more detailed information concerning the completion of each user’s tasks. The referenced sections are noted in the table.

Note: More than one of these roles may be performed by the same person. Each user who is assigned a particular task in the workflow is identified in the Project Profile (ref: Section 3.5.1). Tasks with an * may be skipped within the workflow process.

DOCUMENT LIFECYCLE STATE	ACTIVITY (TASK)	USER ROLE
In Work	Document Creation, In-work and Re-work updates, and Document Submittal	Document Creator (ref: Section 4.2.1)
Receiving	Receive Document	CDM Receipt Desk (ref: Section 4.2.2 and 4.2.14)
Rework (if necessary)	Rework	Document Creator (ref: Section 4.2.13)
Preliminary Review	*ACIR Review	ACI Rep (typically the CER) (ref: Section 4.2.4)
	*Contracting/Agreement Authority Review (if Contractor-Produced Document)	Contracting/Agreement Authority (ref: Sections 4.2.3 and 4.2.12)
Prepare for Evaluation	*Select Review Participants	Project Engineer (typically the Lead Systems Engineer) (ref: Section 4.2.5)
	Evaluation Preparation	DM Admin (typically the Secretariat) (ref: Section 4.2.6)
Evaluation	*Evaluate	Mandatory/Optional Evaluators (ref: Section 4.2.7)
	Consolidate Evaluation and Recommend Disposition	Data Package Engineer (typically the OPR Designee) (ref: Section 4.2.8)
Disposition Prep	Prepare for Board Meeting	Secretariat (ref: Section 4.2.9)
Board Review	*Board Concurrence	Board Member (ref: Section 4.2.10)
	Document Disposition	Board Chair/Approval Authority (ref: Section 4.2.11)
Dispositioned		
Finalization Check	Receive Resubmitted Document (Contractor Produced)/Quality Check (In-house Cat 1)	CDM Receipt Desk (ref: Section 4.2.14/4.2.15)
	Evaluate Re-submittal (if undirected changes were found) (Contractor-Produced)	DPE (Ref: Section 4.2.8)
	Drawing Check (In-house Cat 1 Docs)	Drawing Checker (Ref: Section 4.2.16)

Final Authorization (In-house Category 1 Documents)	Approve Document (In-house Cat 1 Docs)	Document Approval Signatories (Ref: Section 4.2.17)
	Release Document (In-house Cat 1 Docs)	CDM Receipt Desk (Ref: Section 4.2.18)
	MSFC Release (In-house Cat 1 Docs)	MSFC Release Desk (Ref: Section 4.2.19)
	Route to MSFC Repository (In-house Cat 1)	Receipt Desk (Ref: Section 4.2.20)
Approved		
Released		
Rejected		
Cancelled		
Accepted		
Accepted with Action		
Stored		

* Steps that can be skipped in the workflow process.

The Document may be given one of the following dispositions after Board Review. The lifecycle state that is associated with each disposition is also noted in the list below:

- Approved As Written – (Approved State). This is the state in which documents have been approved by the Board Chair (Approval Authority). This is the final state for Contractor-produced Type 1 and 2, External agency-produced Category 1, and In-house produced Category 1 documents.
- Approved with Changes – (Approved State). This is the state in which documents have been approved with changes by the Board Chair (Approval Authority). This is a disposition state for Contractor-produced Type 1 and 2, External agency-produced Category 1, and In-house produced Category 1 documents.
- Disapprove – (Cancelled State). This is the state in which the Board Chair rejects a document and no re-submittal is requested. This is a disposition state for Contractor-produced Type 1 and 2, External agency-produced Category 1, and In-house produced Category 1 documents.
- Disapprove – Re-Submit - (Cancelled State). This is the state in which the Board Chair rejects a document and a re-submittal is requested. This is a disposition state for Contractor-produced Type 1 and 2, External agency-produced Category 1, and In-house produced Category 1 documents.
- Accepted – (Accepted State). This is the final state for Documents which have been accepted by the Board Chair (Approval Authority). This is the final state for Contractor-produced Type 3, External-produced Category 2, and In-house produced category 2 documents.
- Accepted with Action – (Accepted State). The final state for Documents which have been accepted with Action by the Board Chair (Approval Authority). This is the final state for Type 3, External Produced Category 2, and In-house produced category 2 documents.

- Stored – (Stored State). Documents reviewed and kept for reference.
- Released – (Released State). The state in which the document has completed the workflow and is released. The document will automatically be placed on the Document Master List.

2.2.1.1 Document Types

A document's lifecycle is determined by document type or category and the document's origination. The following sections identify the three main origination classifications of documents and the possible types or categories of each.

2.2.1.1.1 Contractor-Produced

- **Type 1.** All issues and interim changes to those issues require written approval from the requiring organization prior to formal release for use or implementation. (See Module 4 Figure 4-1)
- **Type 2.** MSFC reserves a time-limited right to disapprove in writing any issues and interim changes to those issues. Data shall be submitted to procuring activity for review not less than 45 calendar days prior to its release for use or implementation. The contractor shall clearly identify the release target date in the "submitted for review" transmittal. If the contractor has not been notified of any disapproval prior to the release target date, the data shall be considered approved. To be an acceptable delivery, disapproved data shall be revised to remove causes for the disapproval before its release. (See Module 4 Figure 4-1)
- **Type 3.** These data shall be delivered by the contractor as required by the contract and do not require MSFC approval. However, to be a satisfactory delivery, the data must satisfy all applicable contractual requirements. (See Module 4 Figure 4-5)
- **Type 4.** These data are produced or used during performance of the contract and are retained by the contractor. They shall be delivered when MSFC requests it according to instructions in the request. The contractor shall maintain a list of these data and shall furnish copies of the list to MSFC when requested. (See Module 4 Figure 4-4)
- **Type 5.** These data are incidental to contract performance and are retained by the contractor in those cases where contracting parties have agreed that delivery is not required. However, the Contracting Officer or his representative shall have access to and can inspect this data at its location in the contractor's or subcontractor's facilities. (See Module 4 Figure 4-4)

2.2.1.1.2 External Agency-Produced

Other Centers and NASA Partner Produced Documents are not classified by "Type;" however, there are essentially three "categories" into which such documents fall:

- **Category 1** - Documents are evaluated and approved by a Board or other MSFC Approval Authority. They are checked for ACI and for adherence to any requirements called out in the interagency agreement. (See Module 4 Figure 4-1)

- **<u>Category 2</u>** - Documents are evaluated, but not approved. The NASA Program/Project may suggest changes to these documents. They are checked for ACI and adherence to any requirements called out in the interagency agreement. (See Module 4 Figure 4-5)
- **<u>Category 3</u>** - Documents are neither evaluated nor approved by MSFC. They are checked for ACI. Documents classified as Category 3 that the NASA Program/Project desires to evaluate and/or approve may be reclassified at the option of the NASA Program/Project by changing the category designation to Category 1 or 2. (See Module 4 Figure 4-4)

2.2.1.1.3 In-House Produced (MSFC)

- **<u>Category 1</u>** - Documents are evaluated and approved by a Board or other MSFC Approval Authority. They are checked for ACI and for adherence to any requirements called out in the In-House Data Requirements Documents (DRD), In-house Data Requirements Document (IRDR), or Data Requirements List (DRL). (See Module 4 Figure 4-2)
- **<u>Category 2</u>** - Documents are evaluated, but not approved. They are checked for ACI and adherence to any requirements called out in the DRDs, IDRD or DRL. (See Module 4 Figure 4-5)
- **<u>Category 3</u>** - Documents are neither evaluated nor approved by MSFC. They are checked for ACI. Documents classified as Category 3 that the NASA Program/Project desires to evaluate and/or approve may be reclassified at the option of the NASA Program/Project by changing the category designation to Category 1 or 2. (See Module 4 Figure 4-4)

2.2.2 IEC DDMS Change Request Lifecycle, Tasks, and Users

The lifecycle of Change Management in DDMS originates with a Change Request (CR). A CR is the documentation by which a proposed change is described, justified, and submitted for approval. The following table describes the lifecycle of a CR. The table shows the individual tasks associated with each state of the lifecycle and the user that is responsible for completing each of those tasks. Module 5 of this User's Guide provides more detailed information concerning the completion of each user's tasks. The referenced sections are noted in this table.

Note: More than one of these roles may be performed by the same person. Each user who is assigned a particular task in the workflow is identified in the Project Profile (ref: Section 3.5.1).

CR LIFECYCLE STATE	ACTIVITY	ROLE
In Work	Create, Update, and Submit CR	Project Member (Ref:

		Section 5.2.1)
Receiving	Receive CR	Receipt Desk (Ref: Section 5.2.2)
Preliminary Review	* Screening Group Lead CR Review	Screening Group Lead (Ref: Section 5.2.3)
	* Screening Group Member CR Review	Screening Group Member (Ref: Section 5.2.3)
	ACI Representative CR Review	ACI Representative (Ref: Section 5.2.4)
Prepare for Evaluation	* Select CR Review Participants	Project Engineer (Ref: Section 5.2.5)
	Prepare for CR Evaluation	CM Administrator (Ref: Section 5.2.6)
Evaluation	Evaluate	Evaluators (Ref: Section 5.2.7)
	Close and Consolidate Evaluations	Change Package Engineer (CPE) (Ref: Section 5.2.8)
Disposition Prep	Prepare Disposition	Secretariat (Or CM Admin) (Ref: Section 5.2.9)
Board Review	Board Member CD Concurrence	Board Members (Ref: Section 5.2.10)
	Board Chair signs CD	Board Chair (Ref: Section 5.2.11)
Dispositioned	Notify Contractor/Originator that CR is Dispositioned	Contracting Authority (Contractor-Produced CR) Change Originator (In-house CR) (Ref: Section 5.2.12)
** Implementation	Implement CD Task(s)	Project Member – Actionee (Ref: Section 5.2.13)
** Verification	Verify CD task(s)	Project Member – Concurree (Ref: Section 5.2.14)
Closed		

* Steps that can be skipped in the workflow process.

** These steps are not a lifecycle state of a CR workflow process but are listed to show process.

The CR may be given one of the following dispositions after Board Review:

- Approved as Written
- Approved w/Changes
- Disapproved/Re-Submit
- Disapproved

2.2.2.1 Other Change Object’s Lifecycle States

In addition to the CR, there are other change objects that are introduced during the CR lifecycle and are included in the Change Package that will be presented to the Board for approval. Those change objects are listed below:

- Change Evaluation (CE). A designated evaluator's documented review of a change package which ensures a clear description of the proposed change, justification of the change, and identification of all documentation that is affected by the change.
- Change Directive (CD). The document that records the recommended disposition of a CR as approved or disapproved by a DDMS Program/Project and provides the direction to the originating activity to either implement the disposition into the Program/Project baseline or to communicate the disapproval to the originating activity.
- Change Task(s) – Actions assigned as a result of the approval of the change.

As part of automating the change management review process, the IEC Project has identified the need to customize these Change Objects and enable support of the MSFC Change Management process using the IEC DDMS Lifecycle and Workflow capability. The following is a list of the lifecycles of each of those CM object types:

Module 5 of this User's Guide provides more detailed information concerning these change objects.

CHANGE EVALUATION LIFECYCLE	CHANGE DIRECTIVE LIFECYCLE	CHANGE TASK LIFECYCLE
In Work	**Draft**	**Draft**
Committed	**Board Review**	**Board Review**
Terminated	**Dispositioned**	**Implementation**
	Implementation	**Verification**
	Closed	**Closed**
	Superseded	**Superseded**

Module 1. Introduction

1.1 Overview

The mission of the Integrated Engineering Capability (IEC) Project is to improve the accuracy, integrity, availability, and control of engineering data through establishment of data automation and integration capabilities based on MSFC policies and processes. The IEC Project provides engineering tools and facilities, and a user-oriented environment that enables them to work together. The goal of the IEC Project is to establish a data integration architecture that supports:

- A fully electronic design process to integrate the engineering environment
- A state-of-the-art distributed environment based on engineering processes at MSFC
- Data collaboration internal and external to MSFC
- A broad suite of COTS engineering tools

The Engineering Directorate's (ED) Configuration and Data Management (CDM) Group at MSFC has requested the IEC Project to provide a tool that will automate the Change (Configuration) and Document (Data) Management processes that are currently utilized at MSFC. MSFC has selected the commercial off-the-shelf (COTS) Windchill ProjectLink 8.0 and PDMLink 8.0 applications developed by Parametric Technologies Corporation (PTC) to enable the management of engineering data and design collaboration. The IEC Project has enhanced these Windchill COTS applications to automate change and document management processes. The Design and Data Management System (DDMS) environment has been developed by the IEC Project to provide a comprehensive, integrated approach to the management of the engineering data lifecycle, analysis, and warehousing.

1.2 Course Definition

The IEC DDMS training courses provide an overview of the system as it pertains to Project and Data Management and a more detailed view as it pertains to Change (Configuration) Management. This course also provides instruction on the management of Computer Aided Design (CAD) documents.

Data Management (DM) is the timely or economical identification/definition, preparation, control, and disposition of documents and data required for a program, project or activity. **Configuration Management (CM)** is a discipline applying technical and administrative direction and surveillance over the life cycle of a Configuration Item (CI) to accomplish the following tasks:

- Identify and document the functional and physical characteristics of a CI.
- Control changes, deviations, and waivers to these technical requirements.
- Record and report change processing and implementation status.
- Verify that the configuration of systems and CIs are as specified in configuration identification documentation.

This application suite is designed to enable and automate NASA Program and Project compliance with the requirements of the Change and Document Management Policies and Procedures at MSFC.

1.3 Target Audience

This IEC DDMS Change and Document Management training course targets personnel that have a specific role in project management, as well as personnel that have roles in Change Management, Document Management, and CAD Management.

1.4 Course Topics

Module	Topics	Details
1	The IEC DDMS Big Picture	Background of the IEC DDMS
2	IEC DDMS Overview	Definitions, terminology, workflows, and lifecycle states within the IEC DDMS
3	General User Information	User Interface with the IEC DDMS, creation of the Project Profile
4	Document Management	Access to the DM Process within the IEC DDMS
5	Change Management	Access to the CM Process within the IEC DDMS
6	IEC Reports	IEC Report Types and Details
7	CAD Management	Integration of IEC DDMS with Pro/E CAD tool

1.4.1 IEC DDMS Training Classes

The following training courses are available:

- IEC DDMS Overview – General DDMS Navigation, terminology and definitions, document creation, storing data, routing, Out-of-the-Box functionality, and workflows (Approximately 2 hours)
- IEC DDMS Document Management – Hands-on – Document Creation and utilizing all customized roles and workflows in document management (approximately 6 hours)
- IEC DDMS Change Management – Hands-on – Change Request Creation and utilizing all customized roles and workflows in change management (approximately 6 hours)
- IEC DDMS CAD Management – Hands-on – Specific instruction on managing Pro/Engineer CAD data within DDMS (approximately 3 hours)
- One-on-One Mentoring Sessions – Hands-on – IEC DDMS training at customer's own work station reviewing all functionality of the DDMS. This

training is provided for the project team member that will be assigned the DDMS Project Manager role. (Length of training will vary.)

To schedule training classes for your project, please call IEC DDMS Customer Support at 256-544-3497.

Module 3. General User Information

3.1 Objectives

Upon completion of this module, you should be able to:

- Logon to the IEC DDMS application tool
- Navigate through the IEC DDMS application tool
- Define a DDMS Program/Project Profile
- Define what software downloads are needed to successfully use DDMS
- Conduct a search in DDMS
- Access online resources for help
- Report a problem with DDMS

3.2 IEC User Access Registration

The IEC Project has been given a unique and exciting opportunity to work with the NASA Integrated Services Environment (NISE) Project Team in order to facilitate an integrated NASA IT infrastructure to manage user identity and authentication in a centralized manner via an Identity Management System (IDMS). The IDMS will serve as a single source for user identity and locater information using the Cyber Identity Management System (CIMS) providing only authorized access to IT resources via the NASA Account Management System (NAMS). This solution will ensure that data is accurate and available with appropriate safeguards and security across NASA and provide consistent, accurate account management processes. It will enable the users the ability to log into DDMS using a user id and password for this application.
DDMS URL – https://iec.msfc.nasa.gov

Until IEC DDMS has fully integrated with NISE, all IEC DDMS users will gain access to the system through an interim process using MSFC's Unified Account Management System (UAMS). New users badged to MSFC will follow this interim registration process stated below:

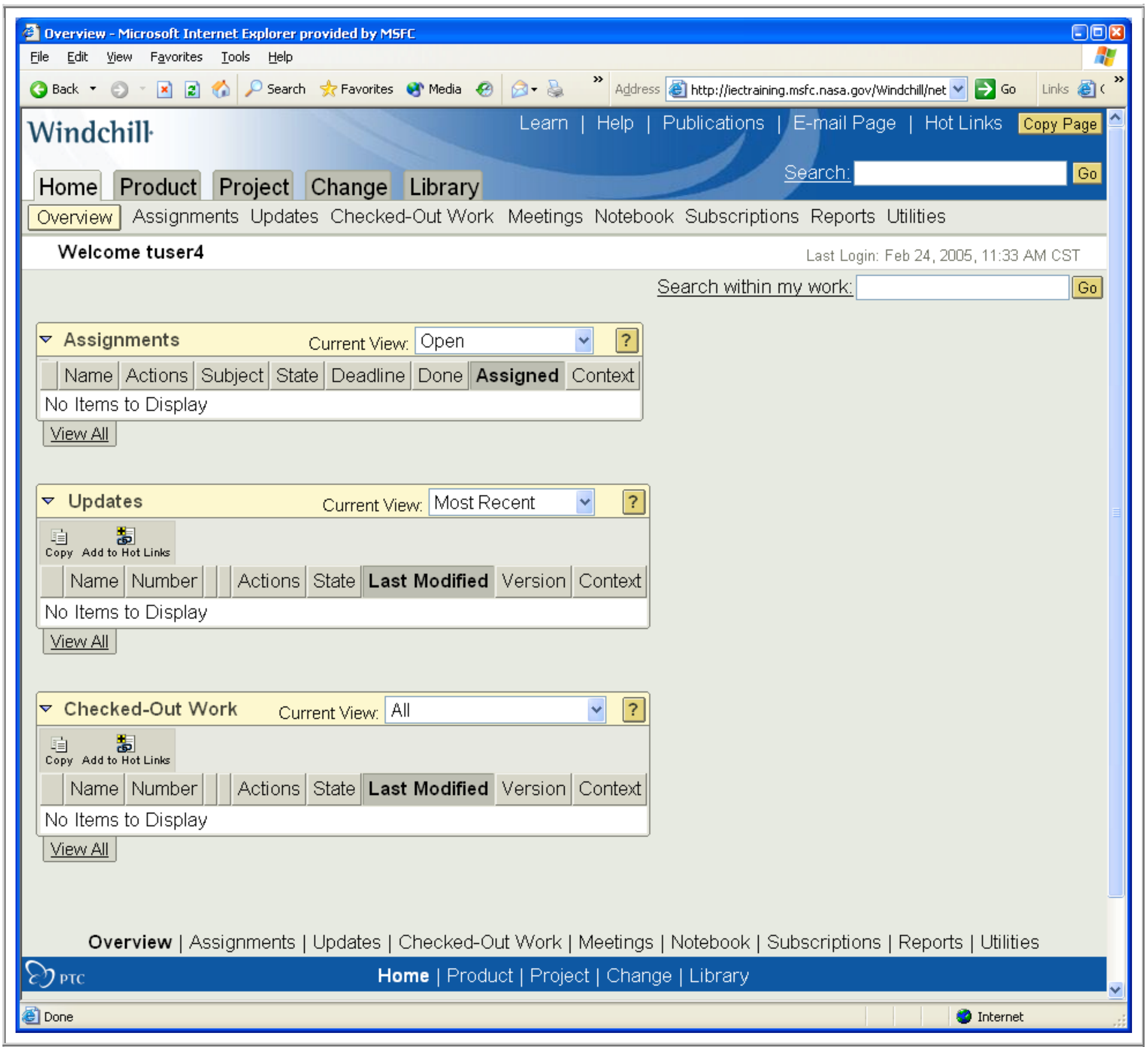
- Access UAMS via the URL https://arsweb.msfc.nasa.gov/uammainmenu.asp
- Select "Request New Account"
- Click "I agree" to the user Responsibility Statement in order to continue
- Indicate whether or not you are a U.S. Citizen, fill in Social Security Number and Last Name, and click "Fill". (This will populate the remaining fields concerning your personal information.)
- Select "IEC DDMS" in the list of systems below the personal info. An IEC DDMS box will pop up at the bottom of the screen. (You may have to scroll down to see it.)
- Indicate whether or not you represent a Foreign–Owned Company.
- Enter the name of the Project(s) for which you are requesting access.
- Submit your request.

For all non-MSFC users, please call IEC DDMS Customer Support at (256) 544-3497 to obtain the necessary form for DDMS access.

Once the UAMS process has been completed, the user will receive a DDMS email invitation and receive final userid and password information from IEC DDMS Customer Support.

3.3 IEC DDMS Home Tab

Upon login to IEC DDMS application, users are presented with the screen below:



IEC DDMS Home Tab

This interface allows access to the following areas (tabs):

- **Home –** This tab provides access to information that is specific to the logged in user.
- **Product –** This tab provides access to the products for which the user is a team member. The user can view and create business information associated with the products. It is from this tab that the user will create configuration-controlled documents and change requests. The data displayed is related to the last product viewed by the user.
- **Project –** This tab provides access to the projects for which the user is a team member. The user can view and create information within the project. It is from this tab that users will collaborate on In-work documentation. The data displayed is related to the last project viewed by the user.
- **Change –** This tab provides access to the status of the change objects within the user's system. The user can also view change requests, change directives, and change tasks from this tab.
- **Library –** This tab provides a place for storing and providing access to business information such as documents and other objects that are not related to a single product. Manages standard parts and documents used across products and projects in an organization. (i.e.. Common Parts, Electrical and Mechanical Libraries).

3.3.1 Home Tab

The home tab contains information that is specific to the individual user and his or her interaction with IEC DDMS. Here, the user can view personal assignments, checked out objects, scheduled meetings, and more. The following are the different COTS pages available from the Home tab:

- The **Overview** page displays the most recent objects in each of the following tables which are located below the Home tab:

    - **Assignments** - A list of tasks assigned to a particular user as part of a workflow process. A workflow is a series of pre-defined tasks that corresponds to an automated process in the user's organization. The user can find out more information about a task that has been assigned to him or her by clicking the link in the **Name** column of the table, or clicking the **See Actions** list and selecting **Details**. If a user needs to reassign the task or update the deadline, those options are available from the **See Actions** column of the table. The details page will display the information the user needs to complete the assignment. This process will be discussed in greater detail in Modules 4 and 5.
    - **Updates** - A list of the objects the user has recently modified. This list is useful if the user needs to retrieve a document that they have recently modified. The user can retrieve it from the **Updates** table rather than have to search for the document within the many folders of the product.
    - **Checked-out Work** - A list of objects that the user has currently checked out. Once the user has finished modifying an object, they can check in the object from this table by clicking **Check In** from the **See Actions** list.

- The **Meetings** is an out-of-the-box capability that provides access to the meetings in which a particular user is involved that have been scheduled in DDMS. From here, meetings can be created or canceled, agendas posted, and minutes added.
- The **Notebook** is an out-of-the-box capability that provides a collection of links to objects and URLs with which the user often works. These links can be organized into folders and subfolders. This is similar to Explorer's "Favorites". These links in the user's Notebook are saved in DDMS and can be accessed from anywhere and from any machine. Documents can be uploaded in the Notebook page as well.
- The **Subscriptions** is an out-of-the-box capability that enables the user to make a request to be notified of certain events concerning documents, parts, or change objects in which the user is interested. For example, you might want to know when a certain document is updated.

From the **Subscriptions** page on the **Home** tab, the user can view personal subscriptions and unsubscribe from objects.

To subscribe to a part, document, or change object, navigate to the details page by clicking or selecting **Details** from a **See Actions** list. Click the **Subscriptions** link on the left side of the page. The Subscriptions page appears. A table will be displayed on the Details page. Click the Subscribe icon and complete the Subscribe to an Event dialogue.

Note: Subscriptions are not available for all object types. If notifications cannot be sent for an object type, the Subscription link will not appear on the details page.

- The **Reports** feature is an out-of-the-box capability that displays a report table that allows the user to run reports from objects created across products and libraries in which the user is a team member. Select the type of report that is needed to run from the **Current View** drop-down list. Reports are discussed in greater detail in Module 6.
- The **Utilities** page provides access to items used to change or enhance the user's interaction with DDMS Project and Product tabs. This page provides access to the **software downloads** that are needed to successfully run DDMS application on their machine.

3.3.2 Product Tab

A product is all the collected information that defines what is being built. A product provides the context in which users collaborate to create this information, where only those users with defined roles have access to the information.

When the user clicks on the **Product** tab, the last page the user viewed for a specific product appears. To view information for a different product, click the **Products List** page below the **Product** tab and select a product from the list. Once a product has been selected, the user can do the following:

- Search for objects in the product using **Search within this product** field, which is located at the top of any page under the **Product** tab.
- From the **Profile** Page, the user will be able to see all the attributes of the Product such as Change Impacts, Affected entities, Approval Authorities or Boards, and Contract/Agreement information.
- From the **Details** page, view the attributes for the product and the end items that exist in the product. The user can also complete actions from the **Actions** list.
- From the **Folders** page, view the objects that reside in the product and complete actions on those objects. Use the **Current View** drop-down list in the **Folders** table to choose the objects listed in the table. Note: In the Product context, the administrative role DDMS Product Manager is the only user that can create a folder. The DDMS Administrator will provide a predefined folder structure.
- From the **Product Structure** page, see the display of the top-level end item.
- From the **Team** page, identify the members of the product team who have access to the information displayed in this product.

3.3.3 Project Tab

A project is a Web-based space which people are invited to join to collaborate as a project team. Team members can access the space, using it to find, store, and share documents, CAD files, links to important Web pages, or other information.

The **Project** tab provides access to information that is specific to a particular project, such as files, tasks, and the project plan. A user can only access projects which he or she has created or to which he or she has been invited.

The top of each project page contains a project information bar which displays key information for the current project, including the name of the project, its description, status, and state. On subsequent visits to the project, the user is directed to the last page viewed by the user. To view other project information, click the links on the navigation bar below the **Project** tab. Each link is described in detail as follows:

- The **Projects List** page displays all the projects of which the user is a team member or to which the user has been invited. The user can view key information and access the project through the hyperlinked project name.
- The **Details** page displays information concerning the project currently being viewed. From this page, the user can perform a number of project-level actions, depending on access permissions, and view details concerning the project, the project plan, and any associated child projects.
- The **Profile** Page displays all the attributes of the Project such as Approval Authorities or Boards and Contract/Agreement information.
- The **Folders** page provides the ability to organize and control access to all data in a particular project, such as folders, documents, parts, and links.

The user can access object-specific actions and object content from this page. Note: In the Project context, any user has the ability to create a folder. The DDMS Administrator is the only user authorized to create folders in the Product Context.

- The **Plan** page displays project schedule information, such as activities, summary activities, milestones, and sub projects associated with the current project. The user can also view and manage a timeline of the project plan on this page. The user can add and remove plan items from the timeline as the project progresses.
- The **Team** page displays all users currently invited to the project. If a team member has accepted the invitation, the joined status is "Yes", and a link to his or her e-mail address is activated. If a team member has not accepted the invitation, the joined status is “No”. The following user information is also displayed: e-mail address, telephone number, organization, and role. It is from this Team page that a project manager of the project can add roles and members and remove members.
- The **Resources** page shows the resources (people, facilities, equipment, etc) allocated to a project. They are tracked as part of the project budget and status.
- The **Meetings** page displays all of the meetings scheduled for this project. The information is similar to that displayed on the Meetings page of the Home tab except that it is project-specific.
- The **Assignments** page within each project displays project assignments for all team members in a particular project. The assignment information is similar to the information displayed on the Assignments page of the Home tab except that it is project-specific and displays the assignments of everyone, rather that those of a particular individual. If a user sees Assignments that are not assigned to them personally, the assignment is not actively linked.
- The **Forum** page displays any ongoing discussions concerning the project. All team members may participate in a discussion.
- The **BOM** page displays information relevant to a particular part or assembly. If you have not yet viewed the product structure of a part, the **BOM** page does not appear in the list beneath the Project tab. If you have viewed product structures before, the most recently viewed product structure is displayed.
- The **IEC Reports** page allows the user to produce detailed reports within each project.
- The **Templates** page is only available to project managers. It allows project managers to manage document and CAD document templates.

3.3.4 Change Tab

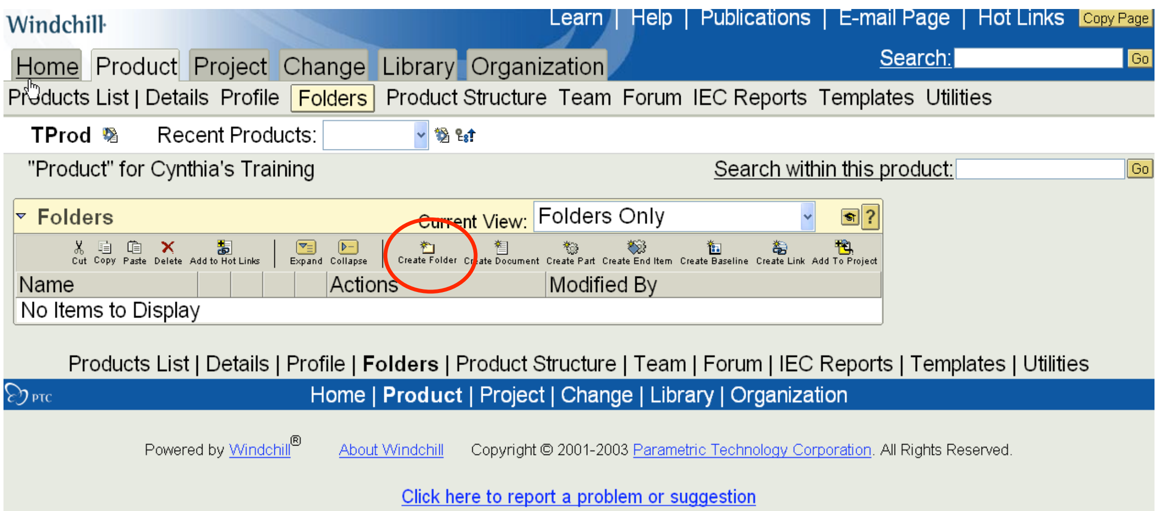
The **Change** tab allows you to view all the change information for products of which you are a team member. From the **Problem Reports**, **Change Requests**, and **Change**

Directives pages that appear under this tab, you can choose to view the information pages of change objects.

3.3.5 Folder Creation

IEC DDMS Admin will provide projects with a suggested folder structure for the Product context. User's are encouraged to use this folder structure to better organize data. This folder structure is reviewed during the project set-up process. User's may create folders for the Project context (tab).

STEP: 1 The user should click on the "Create Folder" icon as shown below:



STEP 2: The user will then choose a name and a location for the folder and select access control. If no location is selected, the folder will become a root folder. Possible access control options include:

- Full – User has total access of all the data in the folder including read, update and delete privileges.
- Update – User can read and change the data in the folder.
- Read Only – User can only view data in the folder
- None – User will not be able to view data or even see the folder.

3.4 Before You Begin

Before you begin using IEC DDMS, you may need to download some prerequisite software such as the Java Runtime Environment (JRE), Java plug-ins, and ProductView (CAD Management) which will enable you to successfully run the IEC DDMS application. Most of these necessary prerequisite software installations can be accessed through the IEC DDMS application. To download and install the available software needed, use the following procedure:

- From the **Home** tab, navigate to the **Utilities** page, and click the **Software Downloads** link.

If prompted, read the license agreement, and click **Accept**.

- On the **Software Download** page, click on the available installations provided.
- Follow the provided instructions to open the setup program and complete the installation.
- Some updates will not be fully installed until you restart your computer.

If particular software is needed and not provided, please contact the NASA Information Support Center (NISC) 544-HELP, Option 0.

3.4.1 User Preferences

Also, from the **Utilities** page, the user may choose to customize their view of DDMS. For example, user preferences, security settings, software downloads, and visualization capabilities are accessible from this page. A user may set preferences in the areas of display, content search, tables, etc. There are system defaults in place. The user may change those default settings from this page. Selecting User Preferences may also be accessed by clicking on Search in the upper right hand corner of screen.

3.5 Administrator Roles Within the DDMS

The IEC DDMS Administrator has the ability to perform all roles within the system. However, there are certain tasks that are unique to the DDMS Admin role. The following list describes these tasks:

- Creating or Deleting Organizations, Projects and Products
- Assignment of DDMS Project or Product Manager – (NASA Program/Project personnel who will manage the DDMS environment)
- Initiation of DDMS Program/Project Profile – specific information about DDMS Program/Project

Once assigned, the DDMS Project or Product Manager will use the information provided in the DDMS Program/Project Profile to perform the remaining administrative tasks which completes the set up procedures for the Program/Project within DDMS. The following list describes these tasks:

- Team Creation
- Board Creation
- Contract/Agreement Creation

The information provided by the NASA Program or Project to the IEC DDMS Administrator is crucial to the overall success of the IEC DDMS application and directly affects its ability to meet the Project's Document and Change Management needs. The following section provides specific information needed for the profile.

3.5.1 IEC DDMS Program/Project Profile

All data within DDMS will be managed within the context of a Program/Project for users who are associated with the Program/Project. The various pieces of information that comprise the profile are described below. The user functions necessary to create and maintain these profiles are also described.

Recognizing that each NASA Program/Project may have slightly different needs, the Profile concept has been designed to allow the DDMS Project Manager to tailor the way the DDMS application works for users, the roles those users are assigned, the impact types to consider for Change Management, the participating organizations, etc.

The following information is required to complete the Project Profile:

<u>Project/Product Creation – DDMS Admin</u>

- A unique Project and/or Product name
- A unique NASA Program/Project acronym

<u>Team Creation – Project or Product Manager</u>

- Identification of users assigned to the following roles:
    - DDMS Program or Project Manager
    - General Members
    - Receipt Desk Representative
    - ACI Representative (ACIR)
    - Screening Group Lead/Members
    - Contracting/Agreement Authority
    - Project Engineer
    - CM and DM Administrators
    - Data Package Engineer (DPE)
    - Change Package Engineer (CPE)
    - Mandatory Evaluators
    - Optional Evaluators
    - Board Member
    - Board Chair
    - Secretariat
    - Drawing Checkers
    - Signature Authorities
    - MSFC Release Desk

<u>Board Creation – DDMS Project or Product Manager</u>

- Boards – Defines groups of individuals acting as approval authorities for a given NASA Program/Project. The needed information for each Board is as follows:
    - Name
    - Level (I, II, III, etc)
    - Type (DCB, CCB, PCB, etc.)
    - Description
    - Board Activation and Deactivation dates (Deactivation Date will be filled in after the Board is deactivated)

- List participants of the Board and indicate specific roles (Board Chair, Secretariat, and Board Members)

Organization Creation – DDMS Project or Product Manager

- Organization – Defines each organization that may be a party to an agreement (contractors, partners, MSFC, other centers) or otherwise participating in a NASA Program/Project. Each organization shall have:
  - A unique acronym
  - A name
  - An Address (not required but allowed)
  - A CAGE Code – (Commercial and Government Entity Code - Alphanumeric code which primarily identifies contractors in the mechanical interchange of data
  - An Org Code (not required but allowed)

Contract/Agreement Creation – DDMS Project or Product Manager

- Contract – Defines each Contract, Partner Agreement, or Other Center Agreement for a NASA Program/Project. For each contract, the system shall require the following:
  - Be associated with only one Project Profile
  - A unique contract number
  - A participant type (contractor, partner, MSFC, Other Center)
  - A title
  - The association of a participant organization
  - Start Date
  - Contracting/Agreement Authority

Once the Project Profile has been created, the system now has the necessary information for the Document and Change Management workflows to function properly. Key Project members, organizations, boards, and contracts or agreements have been identified to set the stage for the DDMS performance capability.

3.6 Online Help and Tutorials

Windchill OOTB offers many resources to help the user answer general questions and solve problems while navigating through the system. The following have been provided in the IEC DDMS header to assist the user:

Link	Description
Learn (OOTB)	Displays tutorials, which walk through procedures for completing operations.
Help (OOTB)	Displays online help for the tab the user is viewing.
Publications (OOTB)	Displays the Publication page, which provides links to all the instruction manuals.
E-mail	Launches a new window that allows you to e-mail the current URL to another user.

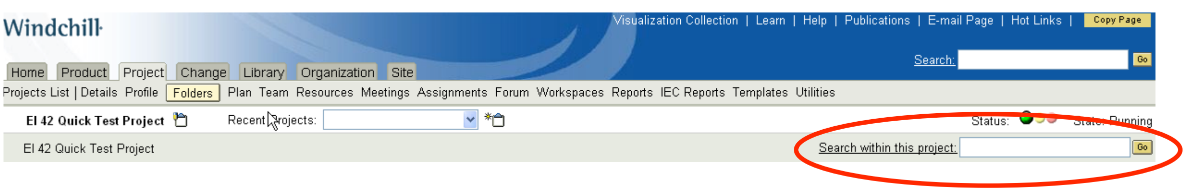
Hot Links	Opens the My Current Hot Links folder of your Notebook under the Home tab. Hot links are URLs for the IEC DDMS pages you access most frequently. The Add to Hot Links button appears throughout the application to allow you to save a link to your Hot Links.

There are some IEC DDMS Help Screens that are specific to the Document and Change Management workflows within DDMS. A user can access these Help screens by clicking on the ? in the upper right hand corner of the following screens:

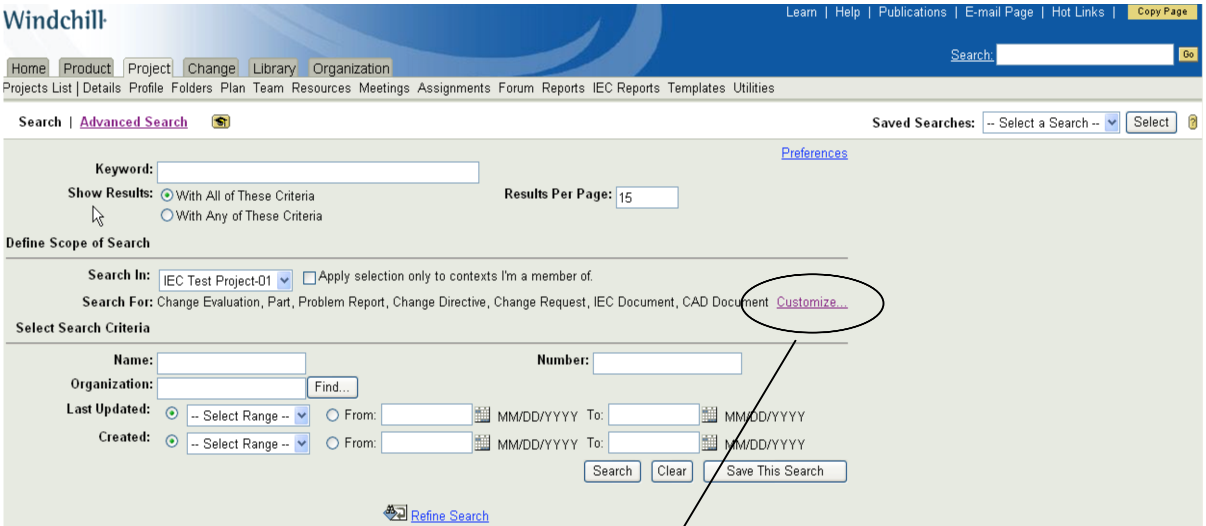
- Create, Update, and View Document (all tabs)
- Create, Update, and View Change Request (all tabs)
- Create, Update, and View Change Evaluation
- Create, Update, and View Change Directive (all tabs)
- Board Concurrence

3.7 Search Capabilities

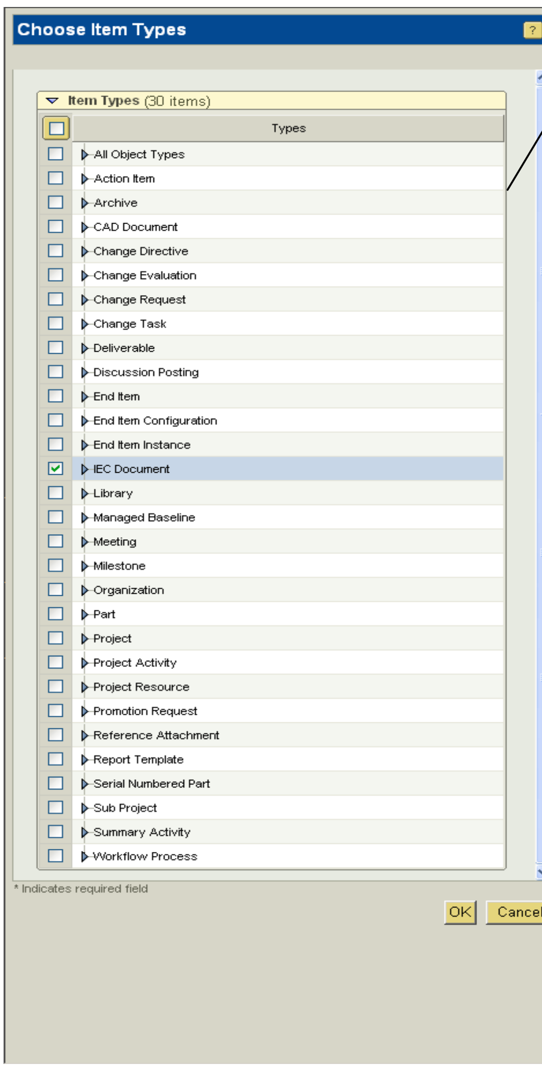
DDMS offers a **Search** option which allows the user the ability to locate parts, documents, and other objects that have been created in DDMS. The user should click on the Search link found at the header within DDMS.



A search screen will pop up, and the user can customize their search and then click **Search**. To perform a more Advanced Search, the user should click on the "Advanced Search" link. The user can modify the search as needed.

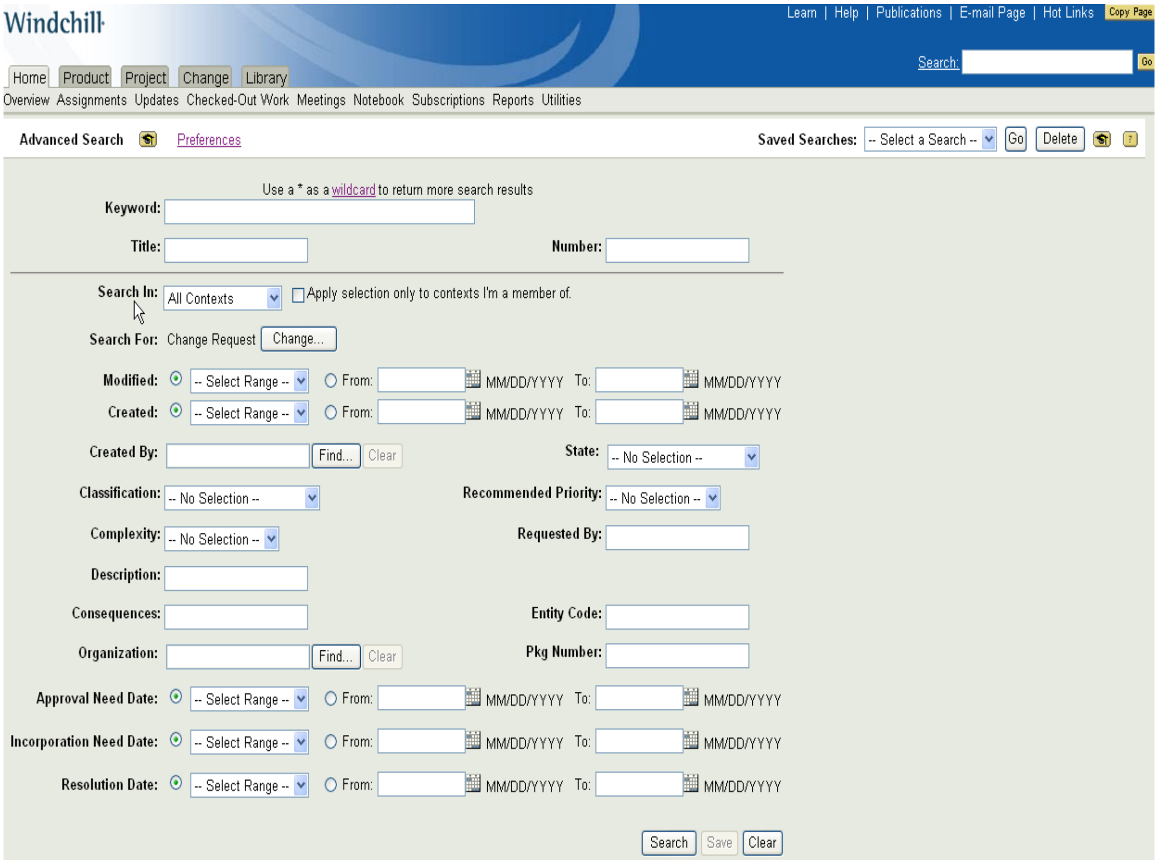


Search Screen



The user can perform a more specific search by selecting a Item Type from the "Customize" option shown here then click "OK".

Once a Change Object Type has been selected, the following screen will be available:



The user can then enter additional information to narrow the search and enable the DDMS search capability to perform more efficiently and quickly. Once information has been added, the user will select “Search”. A table reporting all search results will appear at the bottom of the screen. The user has the option to “Save” the search criteria or “Clear” the search fields to perform an additional search. In essence, this search feature operates as an ad hoc customer reporting tool.

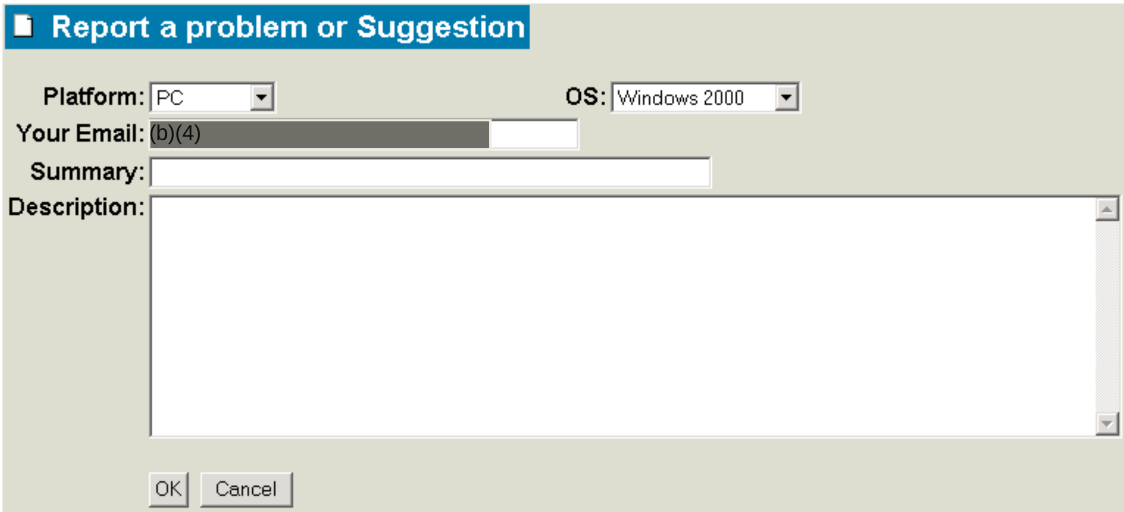
The use of “Wildcards” allows the user to modify a search. Without wildcards, search results are limited to the objects that exactly match the word or words a user enters in the search field. DDMS uses the asterisk (*) as a wildcard. For example, to retrieve a change request with the word “battery” in it, the user would simply enter ***battery*** in the search field. The asterisks indicate the word could be preceded or followed by one or more characters.

3.8 Reporting a Problem

From time to time, while navigating through DDMS application, a user may want to make a suggestion or report a problem that is related to a workflow or system “bug”. DDMS has provided the user with a convenient link to report the problem. Within the IEC DDMS application, a user can click on the following link:

Click here to report a problem or suggestion

The following screen will appear giving the user the opportunity to report the details of the problem or make a suggestion to the IEC DDMS Support Team:



Reporting a Problem or Suggestion Screen

The user should be very specific and concise in the summary of the suggestion or problem. Details may be entered in the description area of the Report.

Module 4. Document Management

4.1 Objectives

Upon completion of this module, you should be able to:

- Access the DM Process in DDMS and use the tool to benefit your Project
- Locate and Reference the MSFC DM Process Workflows per document "type"
- Identify the user roles and responsibilities as they pertain to the DM Process
- Identify the different MSFC document types and categories
- Create, submit, and update a document via the Product tab
- Evaluate and disposition a document using DDMS

4.2 Document Management Workflow Process

The MSFC Document Management Process consists of the activities summarized below Some of these steps/activities are identified with an * which means that they may be omitted if the task is marked "skipped" by the Receipt Desk in the Receiving state or if the role is not populated in the team during Project setup:

DOCUMENT LIFECYCLE STATE	ACTIVITY (TASK)	USER ROLE
In Work	Document Creation, In-work and Re-work updates, Document Submittal, and Document Withdrawal	Document Creator (ref: Section 4.2.1)
Receiving	Receive Document	Receipt Desk (ref: Section 4.2.2 and 4.2.14)
Rework (if necessary) (See Table below for possible Activities during rework lifecycle state.)	Resubmit Document (Contractor-Produced Type 1 & 2)	Document Creator (ref: Section 4.2.13)
	Finalize Document (In-house Produced Cat 1 & 2)	
Preliminary Review	*ACIR Review	ACI Rep (typically the CER) (ref: Section 4.2.4)
	*Contracting (if Contractor-Produced Document)/Agreement Authority Review (if External-Agency Produced)	Contracting/Agreement Authority (ref: Sections 4.2.3, 4.2.12, and 4.2.15)

Prepare for Evaluation	*Select Review Participants	Project Engineer (typically the Lead Systems Engineer) (ref: Section 4.2.5)
	Evaluation Preparation	DM Admin (typically the Secretariat) (ref: Section 4.2.6)
Evaluation	*Evaluate	Mandatory/Optional Evaluators (ref: Section 4.2.7)
	Consolidate Evaluation and Recommend Disposition	Data Package Engineer (typically the OPR Designee) (ref: Section 4.2.8)
Disposition Prep	Prepare for Board Meeting	Secretariat (ref: Section 4.2.9)
Board Review	*Board Concurrence	Board Member (ref: Section 4.2.10)
	Document Disposition	Board Chair/Approval Authority (ref: Section 4.2.11)
	Observe Document Approval Activities (if necessary)	Secretariat (ref: Section 4.2.9)
Dispositioned	Notify Originator of Document	Contracting Authority (ref: Section 4.2.10)
	Resubmit – Approved with Changes	Document Creator
	Resubmit – Unreleased, Approved as Written	Document Creator
	Resubmit – Failed to Properly Change	Document Creator
	Resubmit – Check In Please	Document Creator
	Resubmit due to Rejection	Document Creator
	Resubmit Due to Disapproval by Board	Document Creator
Finalization Check	Receive Resubmitted Document (Contractor Produced)/Quality Check (In-house Cat 1)	Receipt Desk (ref: Section 4.2.14/4.2.15)
	Evaluate Re-submittal (if undirected changes were found) (Contractor-Produced)	DPE (Ref: Section 4.2.8)
	Drawing Check (In-house Cat 1 Docs)	Drawing Checker (Ref: Section 4.2.16)
Final Authorization (In-house Category 1 Documents)	Approve Document (In-house Cat 1 Docs)	Document Approval Signatories (Ref: Section 4.2.17)
	Release Document (In-house Cat 1 Docs)	Receipt Desk (Ref: Section 4.2.18)
	MSFC Release (In-house Cat 1 Docs)	MSFC Release Desk (Ref: Section 4.2.19)

	Route to MSFC Repository (In-house Cat 1)	Receipt Desk (Ref: Section 4.2.20)
Approved		
Released		
Cancelled		
Accepted		
Accepted with Action		
Stored		

In the following sections, each activity will be described in more detail. This process is depicted as a straight line because rejected documents must be revised and the approval process started over.

4.2.1 Creating a Document

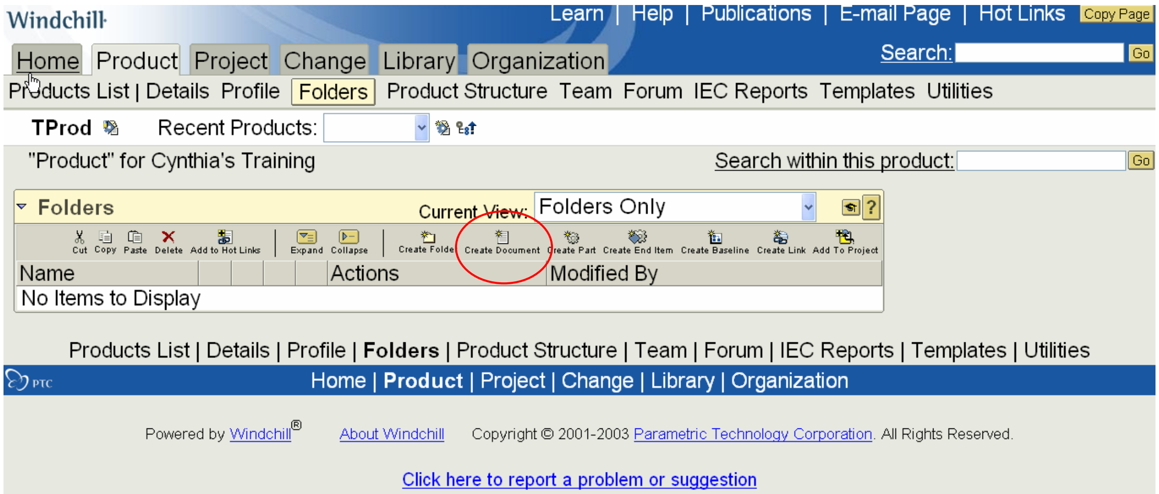
The Product context (tab) of DDMS is intended to be the "container" in which a user creates, tracks, and manages:

- Documents that are to be submitted to and approved by a NASA Program or Project Document Control Board (DCB) or NASA Project Control Board (PCB)
- Change Requests (CRs) that are to be submitted and approved by a NASA Program or Project Configuration Control Board (CCB) or PCB (Ref: Module 5)
- TBD – (DDMS Release 2.0) Hardware-related parts and End Items that are to be controlled for Bill of Materials (BOMs), etc.

With Respect to Document Management, once a document is created in the Product context, it enters the lifecycle state of "In Work" and remains there until the Document Creator submits the document for formal DM review by the desired control board.

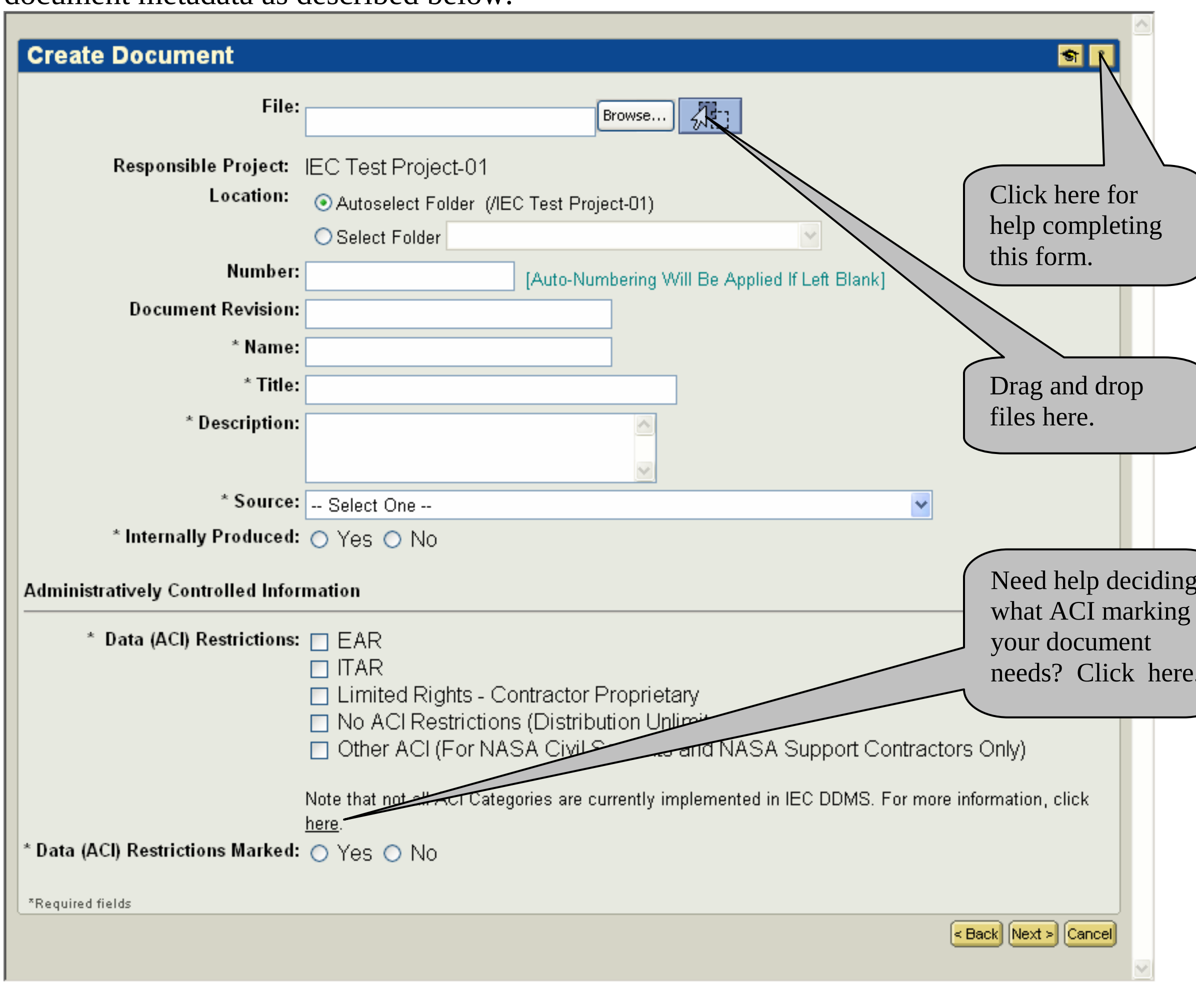
It is expected that initially most documents will be developed or drafted outside DDMS and will be brought into the DDMS (i.e. "Created" in IEC) environment when the user decides to begin managing or maintaining the document in a Project-specific "Product" area of DDMS. At this point, either the user or the Project's assigned DM Administrator will begin Step 1 as described below. In either case, the person who performs Step 1 is known as the "Document Creator". Note: During the Create Document process, there is an opportunity to name a different person as the document's originator/author.

STEP 1: Again, the assumption is that the user (or DM Administrator) is creating a document that will need to go through a NASA Program or Project's formal DM and/or CM process. Starting from the **Product** tab, **Folders** page, the **Document Creator** first selects the "Create Document" icon on the menu bar as shown below:



Step 1 – Create Document: Create Icon (Product/Folders view)

STEP 2: The following screen will appear and the Document Creator will enter the document metadata as described below.



Step 2 - Create Doc/Screen 1: Create IEC Document (Product Context)

The following is a brief description of all the Create Document attributes. This information is conveniently located at the top of the Create Document page and can be accessed by clicking on the 

in the upper right corner of the screen.

File – the name of the file to be attached. This is the content of the actual document being “created” in DDMS. The user can manually type in the pathname, browse their hard drive to locate the file, or “drag and drop” the file from their hard drive to the blue box located to the right of the browse button as shown above.

In addition, the user will specify some other basic attributes used to identify the Document. All of the attribute information should be considered “required” (even if not indicated by an *). This information is not only part of the important “metadata” that will always be associated with the document, but it will also provide any evaluators with as much information about the document as possible.

Number - (automatically generated; Required) – Indicated by the word “AUTO”. DDMS will automatically generate an object number to be used for internal tracking of the document, but the user should also enter the actual NASA, Contractor, or other agency number of the document in a separately designated field.

Document Revision – (Optional)
This entry would be associated with the above “Number” (e.g. Rev B).

Name – (Required)
A “common name” for the document. It will often be a short name or abbreviated title (e.g. “DDMS Req. Doc”).

Title – (Required)
The proper title of the document as it appears on the document title page.

Description – (Required)
A brief description of the document and its contents. This information will appear on the document Details page and is intended to assist the user in being able to quickly assess the purpose or scope of the document.

Source – (Required)
Via the Source dropdown list, the Doc Creator will be able to associate the document with an “owning” organization (e.g. MSFC, Contractor, or other). This Organization information will have been previously established by the IEC DDMS Administrator in the Project Profile. When the user selects the Source, the Source Organization Code and CAGE (or Entity) codes associated with it will also be automatically filled in since that information is unique to a specific Source. The user’s selection will populate three separate data fields on the Document to allow independent searching and reporting on these fields later.

Internally Produced (Required) – The user will indicate whether or not the document is a MSFC Document.

Administratively Controlled Information

Data (ACI) Restrictions (Required) - Official information and material, of a sensitive but unclassified nature, which does not contain national security information (and therefore cannot be classified), nonetheless, should still be protected against inappropriate disclosure. Information designated ACI shall be marked at the top and bottom of each page. ACI designations include the following:

☐ **Export Administration Regulations (EAR) Notice –** (Per NPR 1620.x and MPR 1600.1) If NASA Program/Project documentation is controlled by EAR, it contains information that falls under the purview of the Export Administration Regulations (15 CFR 730-774) and **is export controlled. It shall NOT be transferred to foreign nationals** in the US or abroad without specific approval of a knowledgeable NASA export control official, and/or unless an export license/license exemption is obtained/available from the Bureau of Export Administration (BXA), U. S. Department of Commerce. All copies shall bear the following notice:

Export Administration Regulations (EAR) Notice

This document contains information within the purview of the Export Administration Regulations (EAR), 15 CFR 730-774, and is export controlled. It may not be transferred to foreign nationals in the U.S. or abroad without specific approval of a knowledgeable NASA export control official, and/or unless an export license/license exception is obtained/available from the Bureau of Export Administration (BXA), United States Department of Commerce. Violations of these regulations are punishable by fine, imprisonment, or both.

☐ **International Traffic in Arms Regulation (ITAR) -** (Per NPR 1620.x and MPR 1600.1) If NASA Program/Project documentation is restricted by ITAR, it contains information that falls under the purview of the U.S. Munitions List (USML) and **is export controlled. It shall NOT be transferred to foreign nationals** in the US or abroad without specific approval of a knowledgeable NASA export control official, and/or unless an export license/license exemption is obtained/available from the US Department of State. All copies shall bear the following notice:

International Traffic in Arms Regulations (ITAR) Notice

This document contains information which falls under the purview of the U.S. Munitions List (USML), as defined in the International Traffic in Arms Regulations (ITAR), 22 CFR 120-130, and is export controlled. It shall not be transferred to foreign nationals in the U.S. or abroad, without specific approval of a knowledgeable NASA export control official, and/or unless an export license/license exemption is obtained/available from the United States Department of State. Violations of these regulations are punishable by fine, imprisonment, or both.

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Limited Rights Notice **(a) These data are submitted with limited rights under Government Contract No. _____ (and subcontract ______, if appropriate). These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the Contractor, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, if any; provided that the Government makes such disclosure subject to prohibition against further use and disclosure: (b) This Notice shall be marked on any reproduction of these data, in whole or in part.**

☐ **No ACI Restrictions –** Documentation with no ACI restrictions are assumed to have unlimited distribution and all copies shall bear the following notice:

"Approved for Public Release; Distribution Unlimited"

☐ **Other ACI**

Per NPR 1620.x and MPR 1600.1, information limited to "NASA civil servants and NASA Support Contractors only" may be restricted due to:

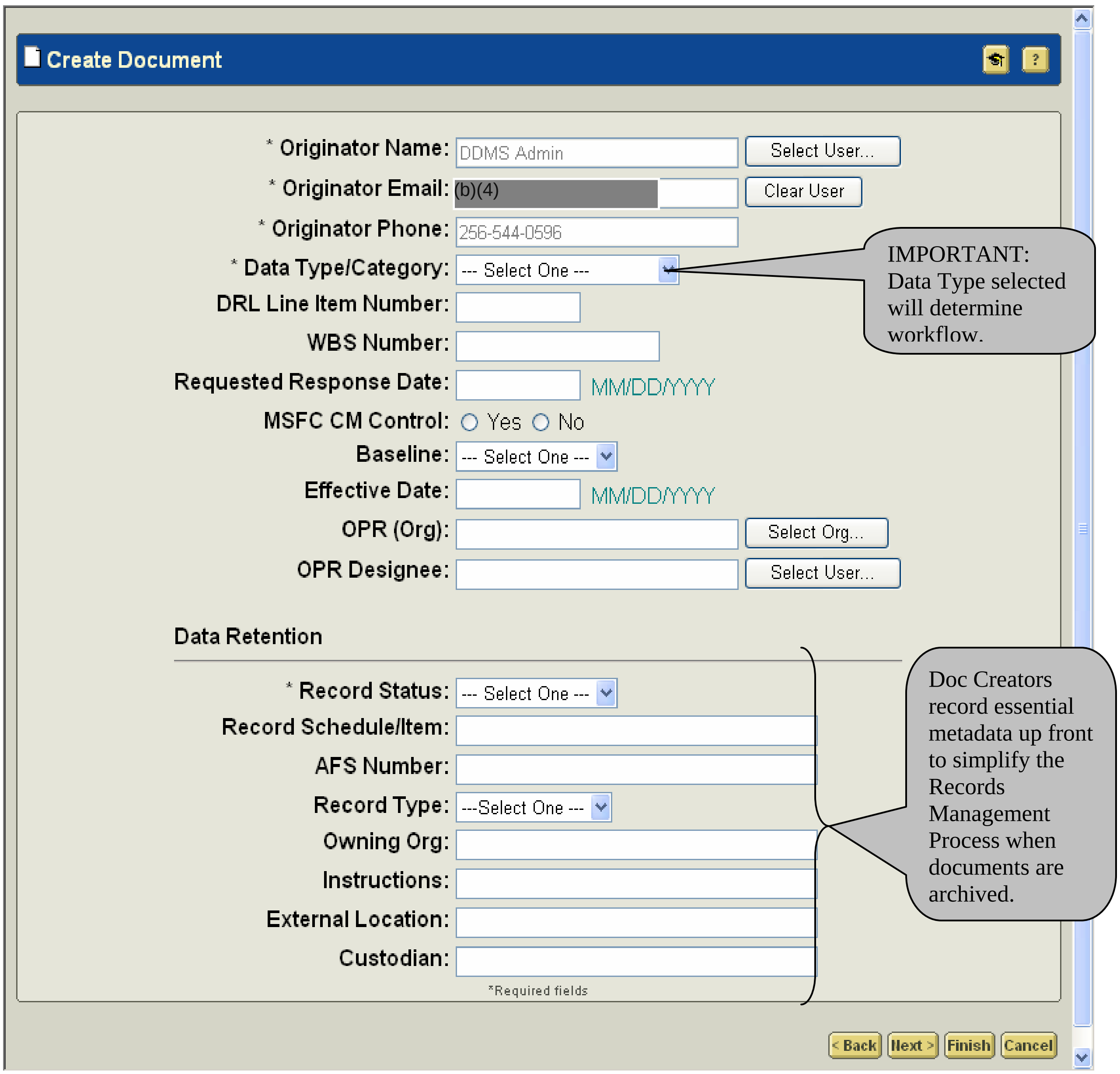
- SBIR
- Restricted Rights software
- Space Act (Sec 303b)
- Patent information
- Copyright
- NASA Trade Secrets
- NASA Business Confidential
- Other NASA sensitive (pre-decisional information)
- Inter- or Intra-Agency Memoranda or Letters

NOTE: Due to ACI restriction, a non-U.S. citizen who happens to create an EAR or ITAR document will not have access to the document after it is created. A security message to that effect will be displayed for that user.

Data (ACI) Restrictions Marked – (Required) – The Project's appointed ACI Representative will ensure that the document is properly marked for ACI.

Once all required information has been entered on the first Create Document screen, the Document Creator will click next to advance to the second screen of the Create Document process. Note: If the DDMS Project is creating a document in the Project Context, required information has been automatically entered and completion of the second screen's additional data fields is optional. The "Finish" button may be clicked at this time. However, if the document is created in the Product Context, the Document Creator must manually enter the required information in addition to any other optional metadata, then click "Finish".

STEP 3: The following screen will appear and the Document Creator will enter the document metadata as described below.



Step 3 - Create Doc/Screen 2: Create Doc Description (Product Context)

Originator – (Name, email, and phone – Required)
An Originator other than the Doc Creator can be selected by using the Indicated fields. If the user is an IEC DDMS User, the creator will click the "Select User" button to search and select the appropriate user. When the user is selected, the Originator's Name, Email, and Phone fields will also be populated. These fields are read-only to ensure consistency between user information listed on documents and that stored in the DDMS user database.

During document creation and update, these fields may be cleared by selecting the "Clear User" button as shown in Screen 2 and then updated accordingly. In cases where the Originator is not an DDMS user, the creator has the ability to enter this information manually.

Data Type/Category (Required) - From the drop down list, the user will choose category 1, 2, or 3 for In-house or External Agency-Produced documents and choose Type 1-5 if the document is Contractor-Produced.

IMPORTANT - The document type and origination will determine the lifecycle and workflow process of the document in the Product Context.

The following is a description of each of the categories or types:

External Agency–Produced Documents

- **Category 1 -Approval** - Documents are evaluated and approved by a Board or other MSFC Approval Authority. They are checked for ACI and for adherence to any requirements called out in the interagency agreement.
- **Category 2 - Acceptance** - Documents are evaluated and accepted but not approved. The NASA Program/Project may suggest changes to these documents. They are checked for ACI and adherence to any requirements called out in the interagency agreement.
- **Category 3 - Store** - Documents are neither evaluated nor approved by MSFC but are needed for reference. They are checked for ACI. Documents classified as Category 3 that the NASA Program/Project desires to evaluate and/or approve may be reclassified at the option of the NASA Program/Project by changing the category designation to Category 1 or 2.

In-house Produced Documents

- **Category 1 - Approval**- Documents are evaluated and approved by a Board or other MSFC Approval Authority. They are checked for ACI and for adherence to any requirements called out in the In-House DRDs, IDRD or DRL.
- **Category 2 -Acceptance** - Documents are evaluated and accepted but not approved. They are checked for ACI and adherence to any requirements called out in the In-House DRDs, IDRD or DRL.
- **Category 3- Store** - Documents are neither evaluated nor approved by MSFC but are needed for reference. They are checked for ACI. Documents classified as

Category 3 that the NASA Program/Project desires to evaluate and/or approve may be reclassified at the option of the NASA Program/Project by changing the category designation to Category 1 or 2.

Contractor-Produced Documents

- **Type 1.** All issues and interim changes to those issues require written approval from the requiring organization prior to formal release for use or implementation.
- **Type 2.** MSFC reserves a time-limited right to disapprove in writing any issues and interim changes to those issues. Data shall be submitted to procuring activity for review not less than 45 calendar days prior to its release for use or implementation. The contractor shall clearly identify the release target date in the "submitted for review" transmittal. If the contractor has not been notified of any disapproval prior to the release target date, the data shall be considered approved. To be an acceptable delivery, disapproved data shall be revised to remove causes for the disapproval before its release.
- **Type 3 - Accept or Store.** This data shall be delivered by the contractor as required by the contract and do not require MSFC approval. However, to be a satisfactory delivery, the data must satisfy all applicable contractual requirements. The doc creator may choose to select Type 3 –Accept (Project will evaluate and accept.) or Type 3 – Store (Project will not evaluate – document is stored for reference.).
- **Type 4.** This data is produced or used during performance of the contract and are retained by the contractor. It shall be delivered when MSFC requests it according to instructions in the request. The contractor shall maintain a list of these data and shall furnish copies of the list to MSFC when requested
- **Type 5.** This data is incidental to contract performance and is retained by the contractor in those cases where contracting parties have agreed that delivery is not required. However, the Contracting Officer or his representative shall have access to and can inspect this data at its location in the contractor's or subcontractor's facilities.

Note: Projects have the option of selecting "No Type" if the document is in work and has been created for collaboration purposes only. This required field will be automatically populated in the Project Context. The Document Creator will not have this option type in the Product Context and must select the appropriate type or category from the options listed above.

DRL Line Item Number (Optional) – Enter Data Procurement Document (DPD)/Data Requirements List (DRL) number obtained from Center Data Requirements Manager (CDRM).

WBS Number (Optional) – If known, the user should indicate what Work Breakdown Structure element is associated with the document.

Requested Response Date (Optional) – In this field, the Doc Creator can indicate a date (mm/dd/yyyy) the document should be dispositioned and approved.

MSFC CM Control – The user will indicate whether or not the document will be placed under Configuration Control by MSFC. The following list provides further details or descriptions of a configurationally controlled document:

- Each request for change or variance is documented and identifiers are assigned
- The evaluation of each change and variance is coordinated with affected areas of responsibility.
- Each request is classified and each effectivity is established.
- Change implementation is planned.
- Each change is implemented and each re-established consistency of product, documentation, operation, and maintenance information services, and training are verified.

Baseline – The user will identify the document as one of the following types of baselines:

- **Allocated –** The approved and released documentation describing a Configuration Item's (CI) performance, interoperability, and interface requirements that are allocated from a system or higher level CI and the verifications required to demonstrate the achievement of these specified requirements.
- **Functional –** The approved and released documentation describing a system or a CI's functional, performance, interoperability, and interface requirements and the verification required to demonstrate the achievement of these specified requirements.
- **Product -** The approved and released documentation describing the necessary functional and physical characteristics designated for production acceptance testing and tests necessary for the support of the CI.

Effective Date – Enter the date (mm/dd/yyyy) the baseline or revised document is approved or the date the document is approved for cancellation. Since this date is recorded during the document creation process, this date would be an "expected date of approval".

OPR (Org) – Office of Primary Responsibility. This indicates the Center organization designated to exercise technical or administrative control over the document. The OPR code does not necessarily indicate the organization code procuring the document.

OPR Designee (OPRD) – The OPRD is an individual within the OPR organization assigned a responsibility for a specific NASA program's data requirements. This person will typically be the Data Package Engineer (DPE) later introduced in the DM workflow.

<u>Data Retention</u>

This Data Retention section of the Create Document screen will most likely be completed by the Receipt Desk or other CDM Personnel familiar with Records Management during Preliminary Review.

According to NPR 1441.1D, all Federal employees are required by law and Agency policy to maintain and preserve records. Good records management requires that as soon as records are no longer needed, archival needs must be recognized and the NASA installation records management program must be followed to ensure that records are appraised, transferred and disposed of efficiently and economically.

Record Status (Required) – From the drop down list on Create Doc/Screen 3, the Doc Creator will choose a particular "Record Status" for each document created in DDMS as follows:

- Active – This status is used for records that are referred to on a frequent basis, i.e. daily or weekly. Records that are maintained in office files for immediate access, use, and reference. Also considered current records, which are necessary for conducting the business of an office.
- Destroyed – This status is used for records that contain information that needs to be effectively obliterated.
- Not a Record – A document is considered a record if it has been created or received by an agency of the U.S. Government under Federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the informational value of the data contained therein. (Non-Record examples: Library materials, reference docs, extra copies of docs, etc)
- Preliminary - This status is not available for documents created in the Product Context. However, if the document is created in the Project Context, the default option of "Preliminary" will be automatically selected on the Create Document Screen 2.
- Transferred – A transferred document is one that is to be moved out of filing cabinets and office space into the legal custody of NARA or other authorized depository.

Record Schedule/Item - A Document's Record Retention Schedule is divided into the following 10 subject categories:

Schedule	Subject Category
1	*Organization and Administrative
2	Legal and Technical
3	Human Resources – Personnel
4	Property and Supply
5	Industrial Relations and Procurement
6	Transportation
7	Program Formulation
8	Program Management
9	Financial Management and Inspector General
10	*Common Records

* Will be used by all offices
All others are dependent on office function/operation

Item is the reference number given to the series of records descriptions in a particular schedule. It is used for transferring records to a central records center.

AFS Number – The AFS number (4-Digit Number) for a document is the Agency Filing Scheme for a group of records (series) that relate to a particular subject or function, result from the same activity, document a specific kind of transaction, take a particular form, or have some other relationship arising out of their creation, receipt, or use.

Record Type – The Document's Record Type can be one of the following types:

- Permanent - In U.S. Government usage, records appraised by NARA as having enduring value because they document the organization and functions of the agency that created or received them; and/or, because they contain significant information on persons, things, problems, programs, projects, and conditions with which the agency dealt. These records are valuable or unique in that they document the history of the agency and generally record primary missions, functions, responsibilities and significant experiences or accomplishments of the agency.
- Temporary – Records approved by NARA or by an authorized agency records schedule for disposal, either immediately or after a specified period of time. They are also called disposable records or nonpermanent records.

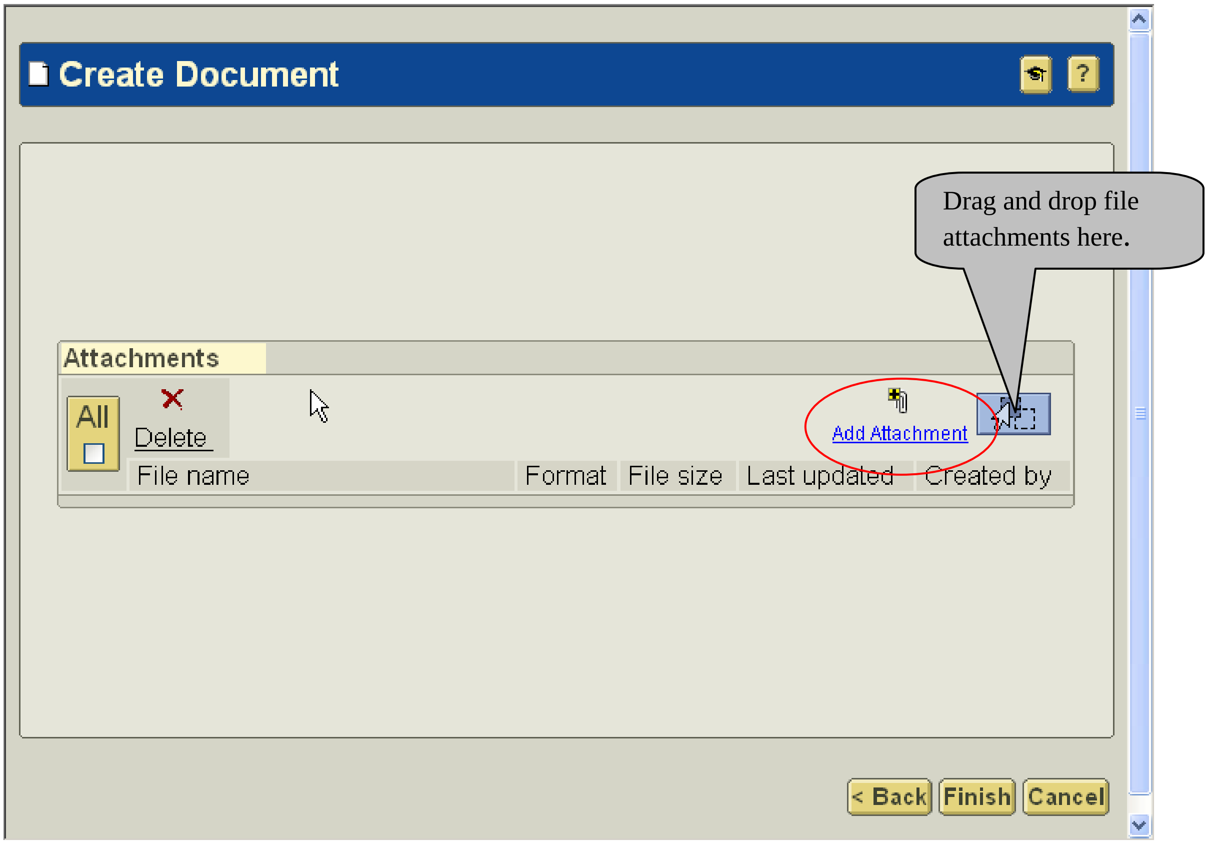
Owning Org - The owning org is the organization that will assume "ownership" of the document and be responsible for its proper disposal. This is usually the Org Code that is named on the Document's cover sheet on In-house documents, the Contractor's name on Contractor-Produced documents, and the External Agency's name for those documents created by an external agency. Usually, but not always, this is the OPR as indicated above on the Create Doc/Screen 3.

Instructions - This field allows the Doc Creator the opportunity to record any instructions concerning the retention of the document (200 character limit).

External Location – In this field, the Doc Creator will record where the document itself will be physically located, for example, Building/Room, or XYZ Database.

Custodian - The Record's Custodian is the individual who is responsible for collecting, indexing, accessing, filing, storing, maintaining, and dispositioning a record or collection of records.

STEP 4: If there are files (references, appendices, or applicable documents) that need to be attached to the document being created, the **Document Creator** will click "Next" to advance to Screen 3 of the Create Document process. Document Creators may then attach content files (other than the primary file content loaded previously) to the Document by clicking on the "Add Attachment" link as shown below. Users will be able to view these attachments by clicking on "Attachments" at the bottom of the details page as described in Section 4.2.1.1. If attachments are added after the document is created, the user will need to navigate to the details page of the document and then select check out and download from the dropdown action list and then select update after the screen is refreshed. The user will then advance to the third "Create Doc" screen and add the attachment. Note: Don't forget to "Check In" the document after the update has been made. Other users will not be able to view the attachments until the document has been checked in.



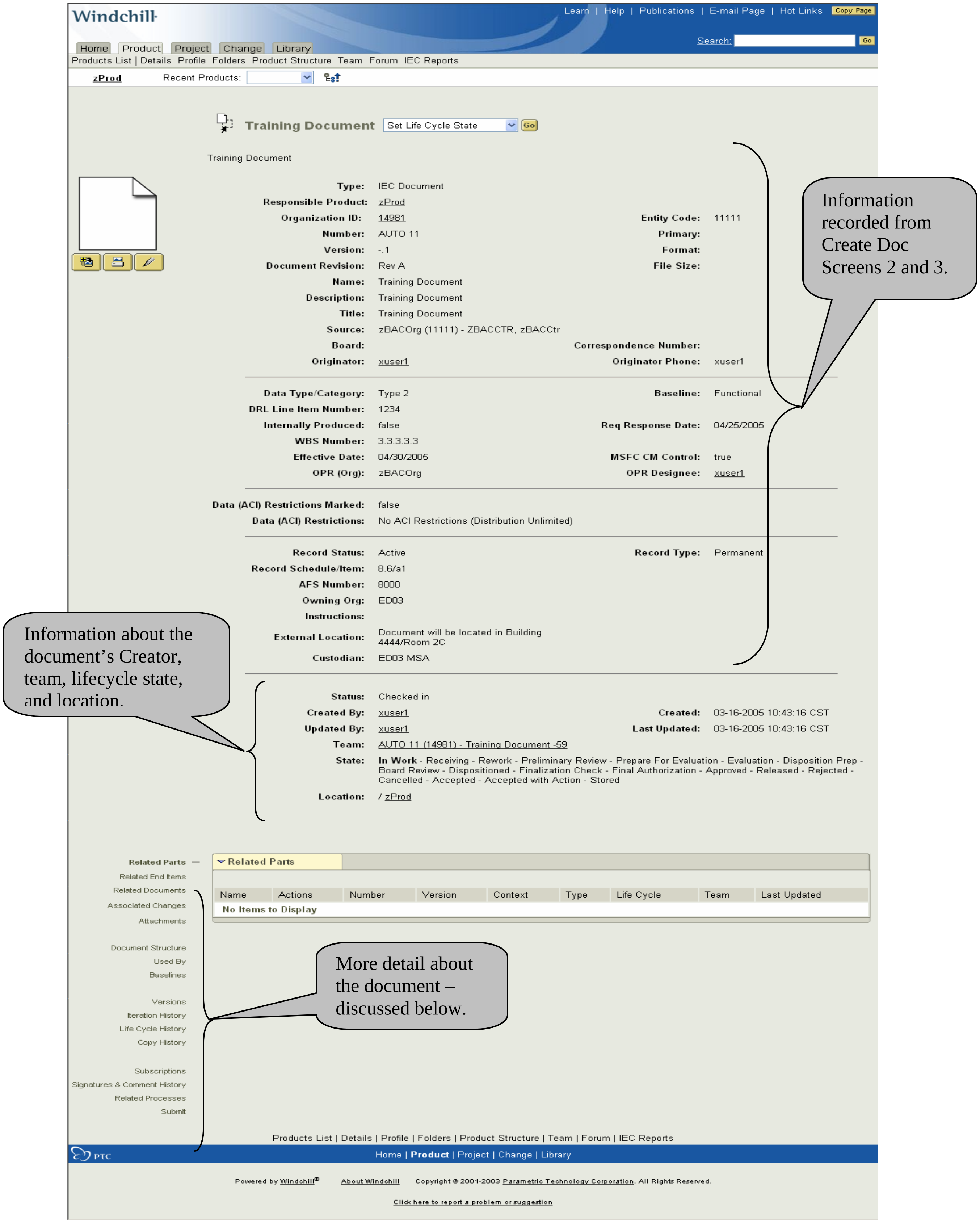
STEP 4 & 5 - Create Doc/Screen 3: Add Attachments

STEP 6: The **Document Creator** will then click "Finish" to complete the document creation process. Note: The document is not submitted for DM or CM processing at this time, but becomes a document "In Work". At this point in the Document Workflow, the Document Creator is the only one that has read/write access to this document. To submit a document for formal review, refer to Section 4.2.1.1.

NOTE: When the Create Doc process is completed, the information selected from these screens will populate appropriate fields so that they will be available for reporting purposes. (For example, the Source selection will populate both a Source Name field and a CAGE Code field for search and reporting purposes.)

4.2.1.1 Viewing and Submitting a Document

From the **Product** Tab, **Folders** Page, a document and its related details or metadata may be **viewed** by clicking on the Details icon ⓘ to the right of the document name. The resulting Details page has several options listed on the bottom left that provides links to additional information about the Document.

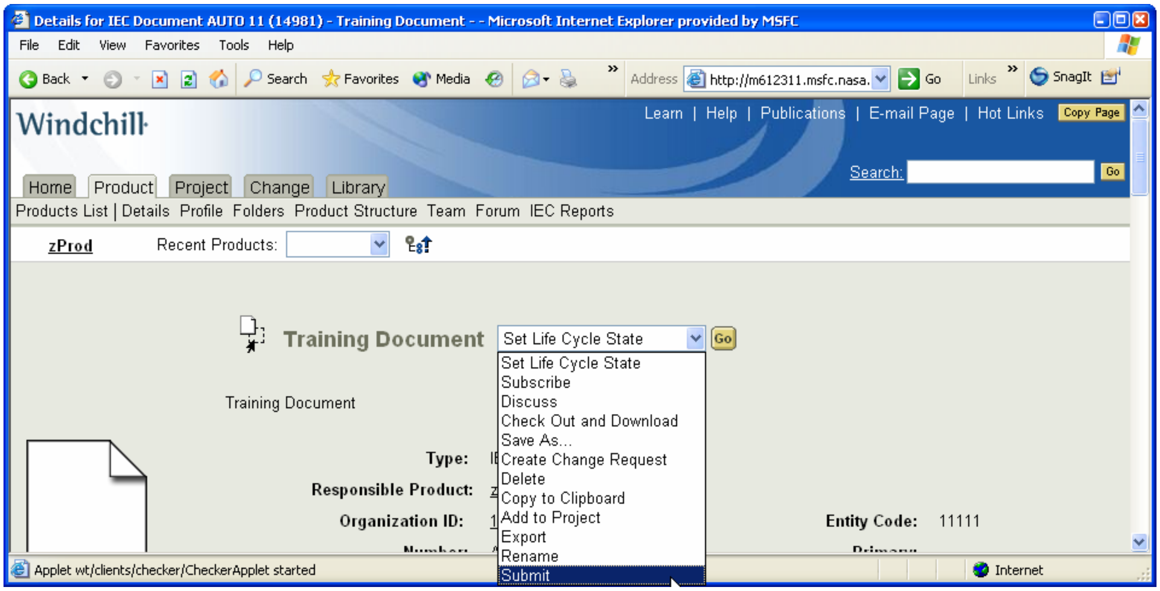


Document Details Page

The following is a brief description of each of these links:

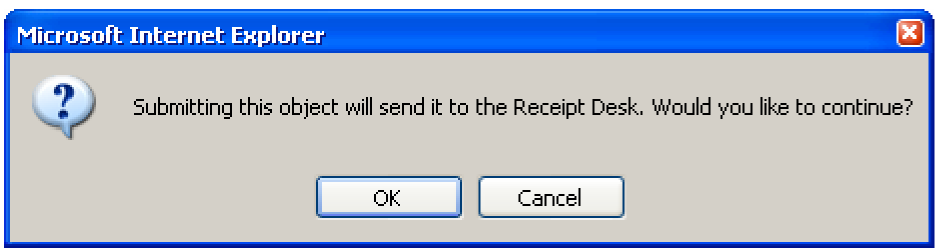
- **Related Parts** - the parts that the document describes
- **Related End Items –** the end items the document affects
- **Related Documents** – the documents referencing or referenced by the current document
- **Associated Changes** – the problem reports, change requests, and change directives related to the document
- **Attachments** – the files attached to the document at the time of creation and update
- **Document Structure –** the hierarchical representation of the documents that are used by the current document
- **Used By –** the documents which use this document
- **Baselines –** the baselines that contain the document
- **Versions –** the version of the document – Each time the document is revised, a new version is created.
- **Iteration History** – the iterations of the document – Each time the document is checked in, a new iteration is created.
- **Lifecycle History** – the lifecycle events associated with the document – Life cycles define the states and workflow of various objects.
- **Copy History** - the document from which this document was copied and any new documents that have been created from this document
- **Subscriptions –** the events you have subscribed to for this document
- **Signatures and Comment History –** tells who has commented on the document and their specific recorded comments
- **Related Processes** – **<u>Used primarily by the DDMS Administrator</u>** - Information about the workflow processes that are associated with the document

Submitting a Document - It is from this Details Page the **Document Creator** will submit the document for formal review. The **Document Creator** will select **"Submit"** from the drop down menu as shown below.



Document Details Page - Submit Option

The following window will appear to assure the user that the document has been successfully sent to the Receipt Desk and the review process has begun.

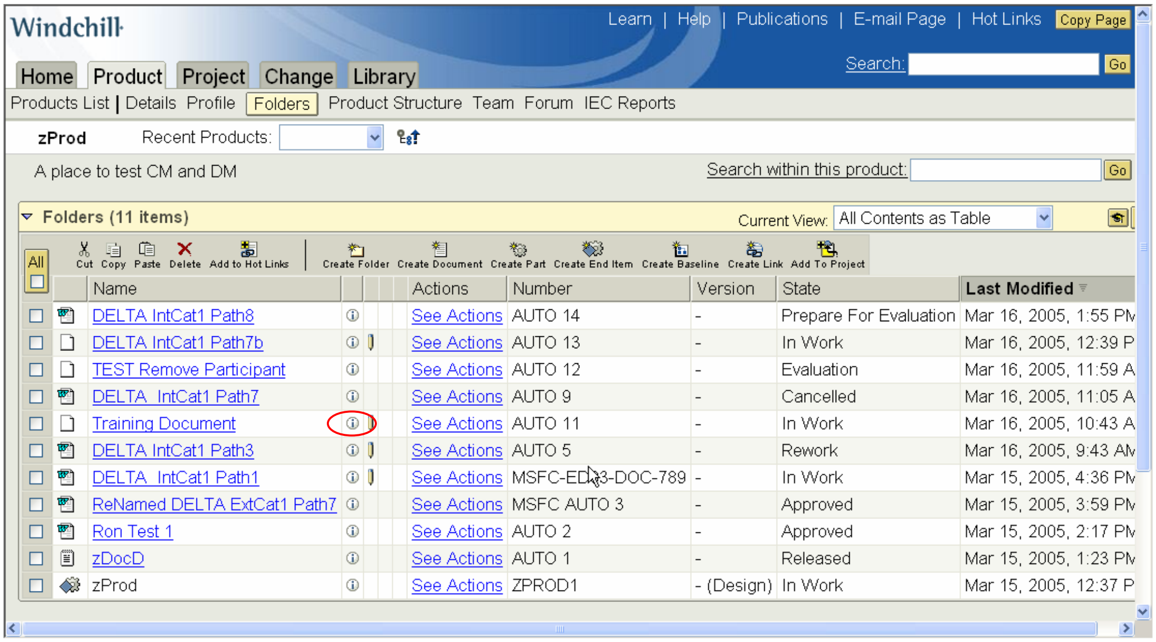


The document's lifecycle state will now change from "In Work" to "Receiving".

4.2.1.2 Updating a Document and Metadata – Check out and Download

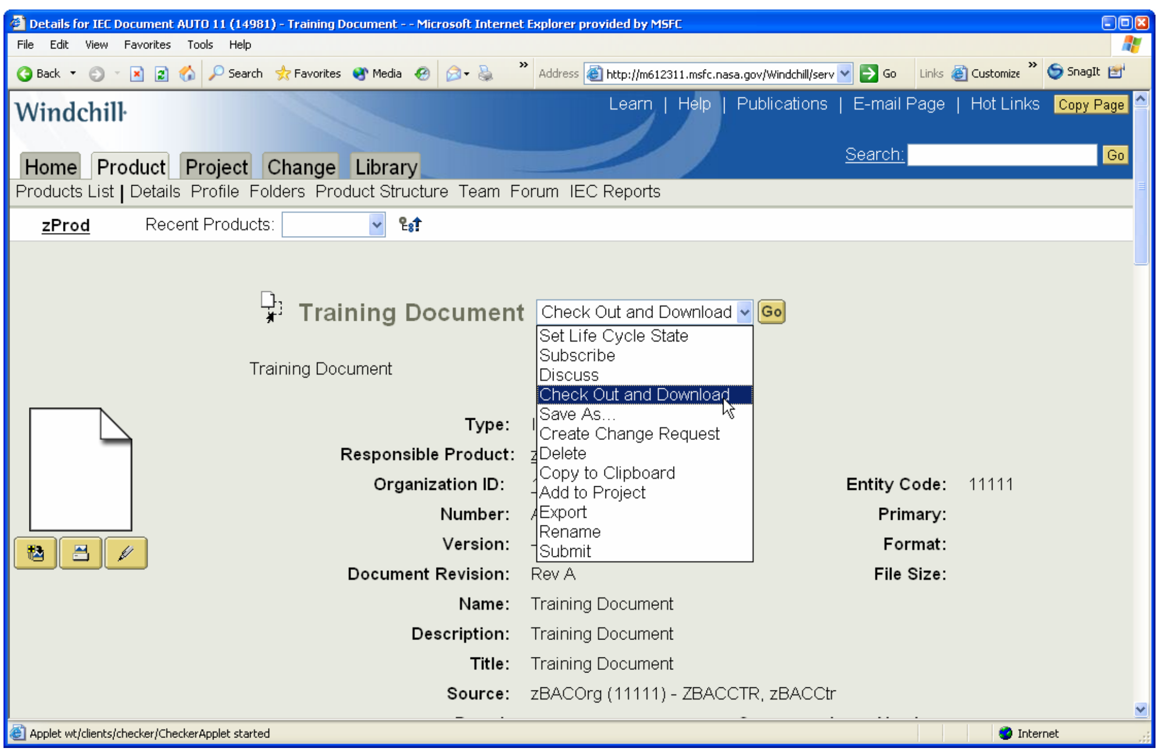
If a document has not been submitted for formal DM or CM processing or has been found unacceptable in the Preliminary Review, the Document Creator has the ability to change the document's content or the metadata associated with that document. Every such change will result in a new iteration of the document; however the document version will stay the same.

STEP 1: From the **Product** tab, **Folders** page, select the file name of the document (or document part) and click on the Details icon ⓘ to the right of the file name as shown below.

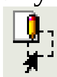


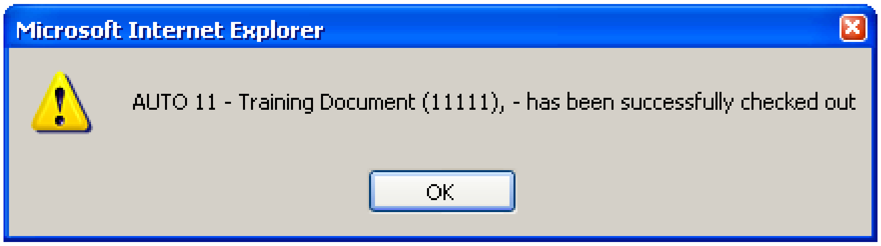
Product/Folders View - Document Details Icon

STEP 2: The **Document Creator** should select "Check Out and Download" from the Detail's Page drop down menu to modify the document. Then press "Go".

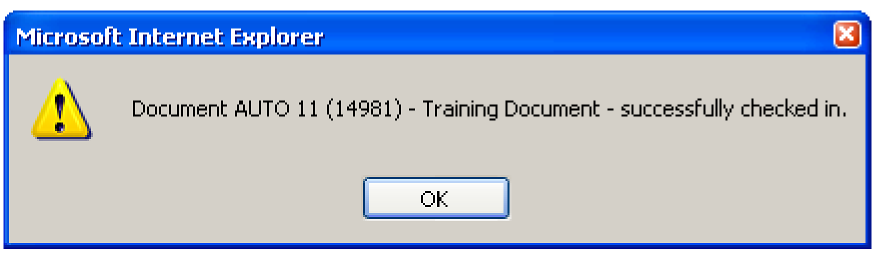


Document Details Page – Check Out and Download Option

The following screen will appear to assure the user that the document has been successfully checked out and the icon beside the document on the details page will look like this :



STEP 3: The **Document Creator** should select “OK”, and then select "Save File to Disk". Choose where the file will be temporarily stored on your computer, and modify the file using the appropriate application (Word, Excel, etc.). Once the document has been updated, go back to DDMS and click the details icon beside the document’s filename. If the document’s metadata (Name, Title, Description Data Type, Baseline, ACI Restrictions, etc.) needs to be updated also, select "Update" from the drop down menu and press "Go". The Create Document information will appear and the user will be able to modify any of the fields. After all updates have been completed, click "Finish". <u>The document must be checked out and downloaded in order for the user to have the option of “Update” and the ability to change the metadata</u>. After all changes to the document and all updates to the metadata have been completed, then the document can be checked in. To “Check In” the document, the user will select the “Check In” option from the Details Page drop down menu and click “Go”. The following screen will appear to assure the user the document has been successfully checked in. Click “OK”.



STEP 4: The Document Creator will click the “Task Complete” button to complete the workflow task and resume the review process.

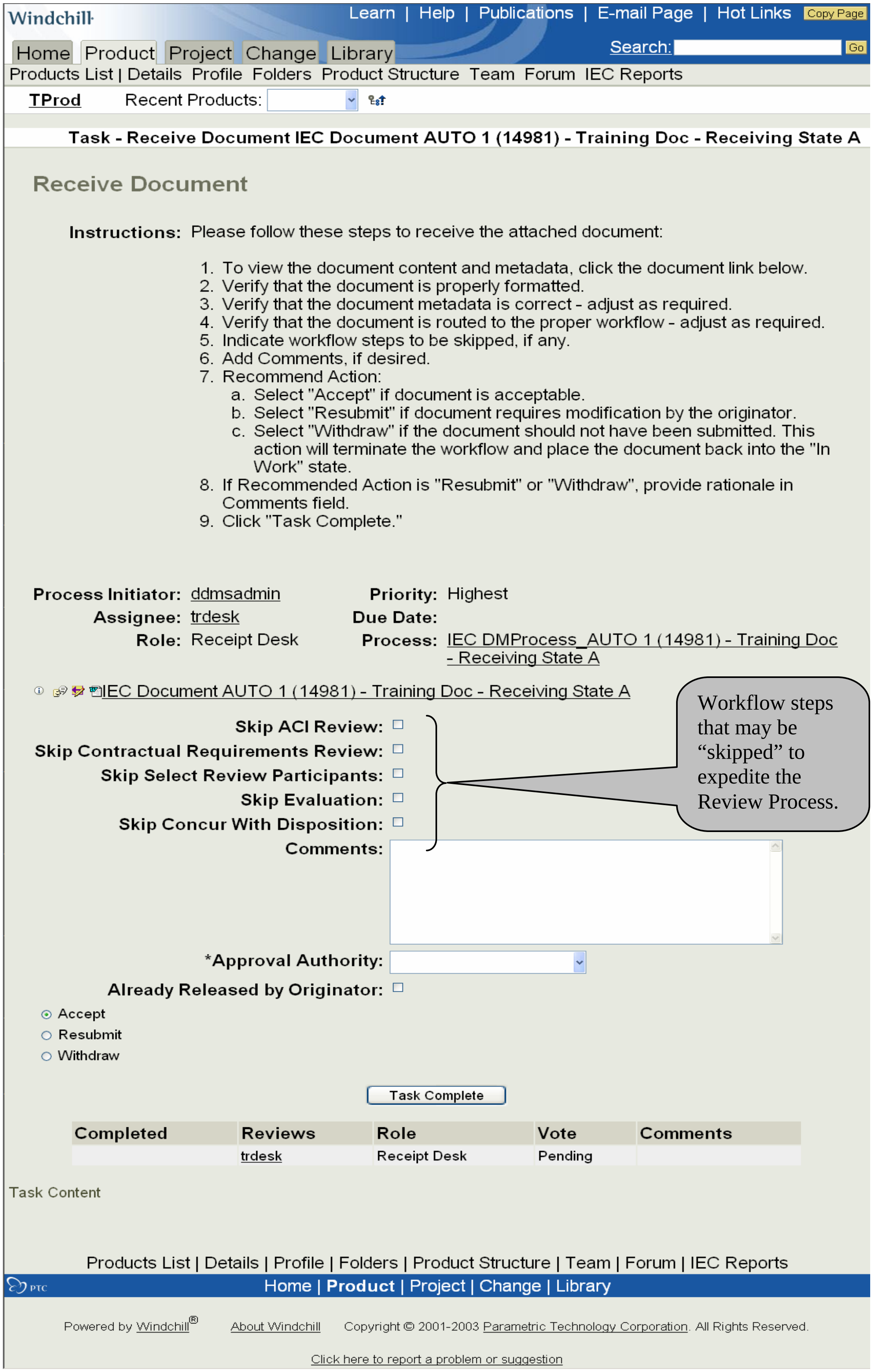
IMPORTANT: When a user “checks out and downloads” files from DDMS, the files are temporarily stored on the user’s hard drive. The user shall assume full responsibility of safeguarding that potentially sensitive data and shall protect it against inappropriate disclosure.

The document will then begin the document review process and be sent to the Receipt Desk for review.

4.2.2 Receive Document

When the Document enters the Receiving state, the Receipt Desk will receive a workflow task via email notification. The appropriate task will also appear in the Assignments table of any users in the Receipt Desk role under their Home tab. The Receipt Desk role is populated in the team set procedures.

STEP 1: The **Receipt Desk** representative will click the Task hyperlink in the email notification OR select the "Receive Document" task from the **Home** tab, **Overview** page, **Assignments** table. The following screen will appear giving the Receipt Desk Representative instructions on how to complete the assigned task:



Receive Document Task Page

STEP 2: The **Receipt Desk** representative will click on the document hyperlink, review the document, and enter comments concerning the receipt of the document.

STEP 3: Depending on the nature of the document, the **Receipt Desk** may mark certain process steps (workflow tasks) that can be skipped, indicate whether or not the document has been released at the Contractor site, select Approval Authority (Board) from the drop-down list, and select the "Accept", "Resubmit", or "Withdraw" radio button. If the Receipt Desk gives the document a recommended action of "Resubmit" or "Withdraw", comments are required. If Withdraw is selected, the document's workflow will be terminated. Note: For future reference, the Receipt Desk and/or Document Creator should keep a record of all withdrawn documents.

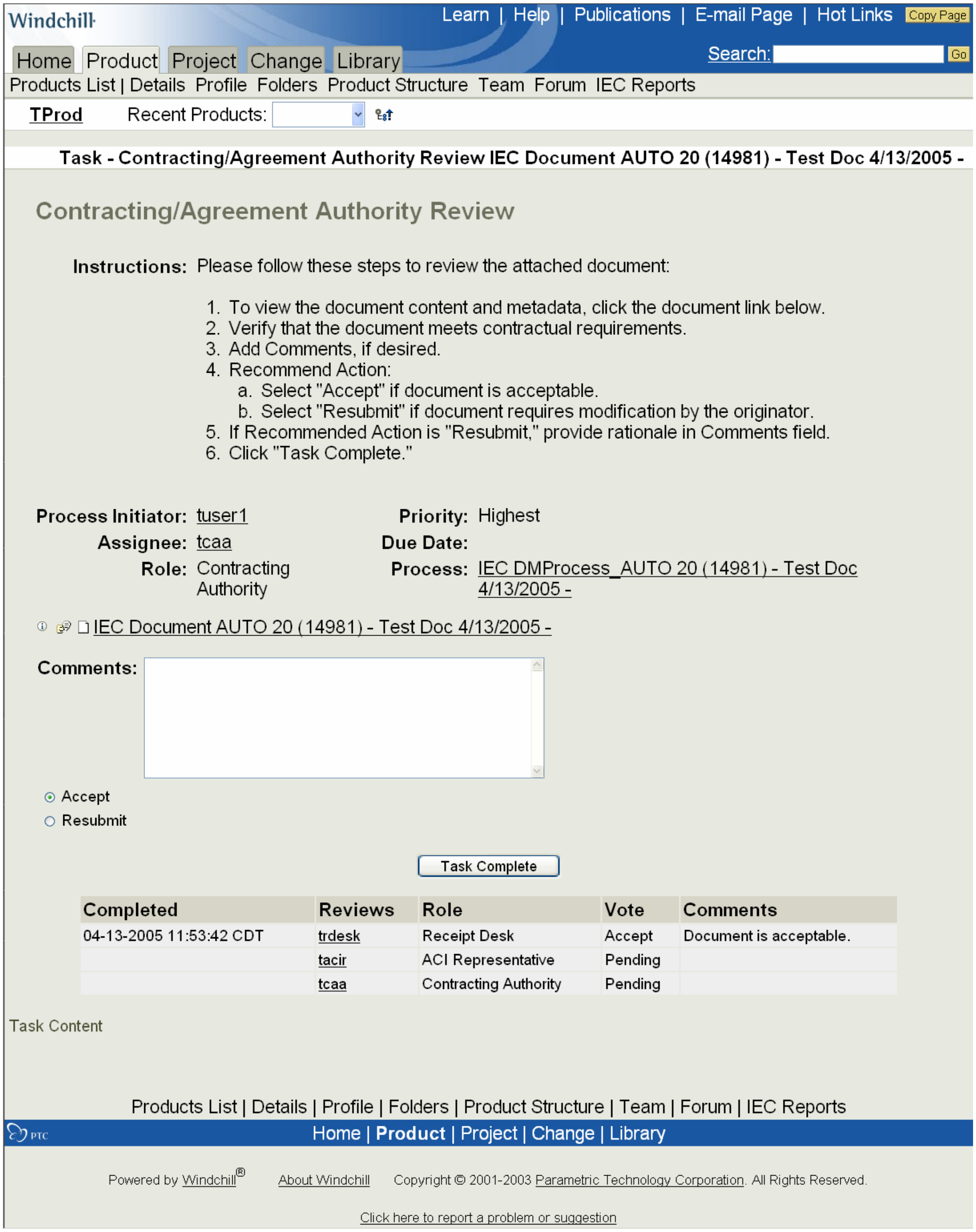
STEP 4: The **Receipt Desk** will click the "Task Complete" button to complete the workflow task.

The document will now move from the Receiving State to the Preliminary Review State. If Resubmit is selected, the Document's lifecycle state will be "Re-Work". If "Withdraw" has been selected, the document's lifecycle state is "In Work".

4.2.3 Contracting/Agreement Authority Review

If a Contracting/Agreement Authority has been identified in the Project Profile, the Receipt Desk has accepted the document for review, and the Receipt Desk did not elect to skip the Contract Review, the Contracting/Agreement Authority will receive a workflow task via email notification. The appropriate task will also appear in the Assignments table of the Contracting/Agreement Authority under the Home tab. <u>This workflow step is only available if the review object is Contractor or External Agency-Produced</u>.

STEP 1: The **Contracting/Agreement Authority** will click the Task hyperlink in the email notification OR select the "Contracting/Agreement Authority Review" task from the H**ome** tab, **Overview** page, **Assignments** table.



Contracting/Agreement Authority Review Task Page

STEP 2: The **Contracting/Agreement Authority** will review the document by clicking on the document hyperlink to ensure it meets NASA Program/Project requirements and choose the "Accept" or "Resubmit" radio button. If the document is not accepted, comments must be entered into the Comments field. If the Contracting Authority does not accept the document, a "Notify Originator of Document Rejection" task will be sent to the Contracting Authority. The Originator will be instructed to Re-submit the document.

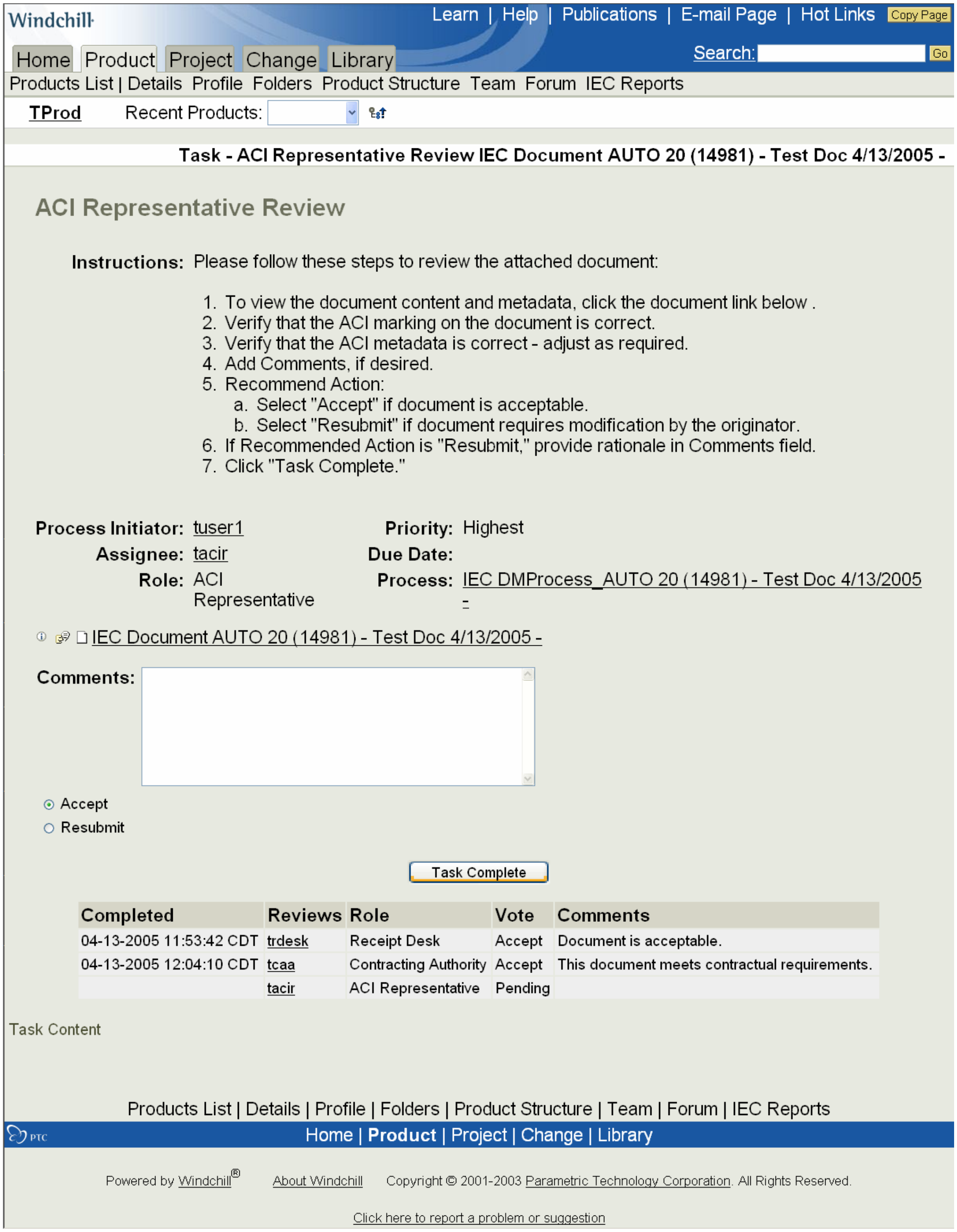
STEP 3: The **Contracting/Agreement Authority** will click the "Task Complete" button to complete the workflow task.

4.2.4 ACI Representative Review

Concurrently with the Contracting/Agreement Authority, if applicable, the document is sent to the ACI Representative for review. The ACI Representative will receive a workflow task via email notification. The appropriate task will also appear in the Assignments table of the ACI Rep under the Home tab**. (Note: If the ACI Representative role has not been assigned to an individual and indicated in the Project Team or if the Receipt Desk has elected to skip the ACIR Review, this task will be skipped.)**

STEP 1: The **ACI Representative** will click the Task hyperlink in the email notification OR select the "ACI Representative Review" task from the **Home** tab, **Overview** page, **Assignments** table.

NOTE: During Preliminary Review, only the following select set of users has read access to the document: Creator, Receipt Desk, Contracting Authority, and ACIR.



ACI Representative Review Task Page

STEP 2: The **ACI Representative** will review the document by clicking on the document hyperlink to ensure the ACI marking is accurate.

STEP 3: The **ACI Representative** will choose the “Accept” or “Resubmit” radio button. If the document needs to be resubmitted, rationale must be entered into the

Comments field. These comments will be used by the Originator to correct the ACI marking and resubmit the document.

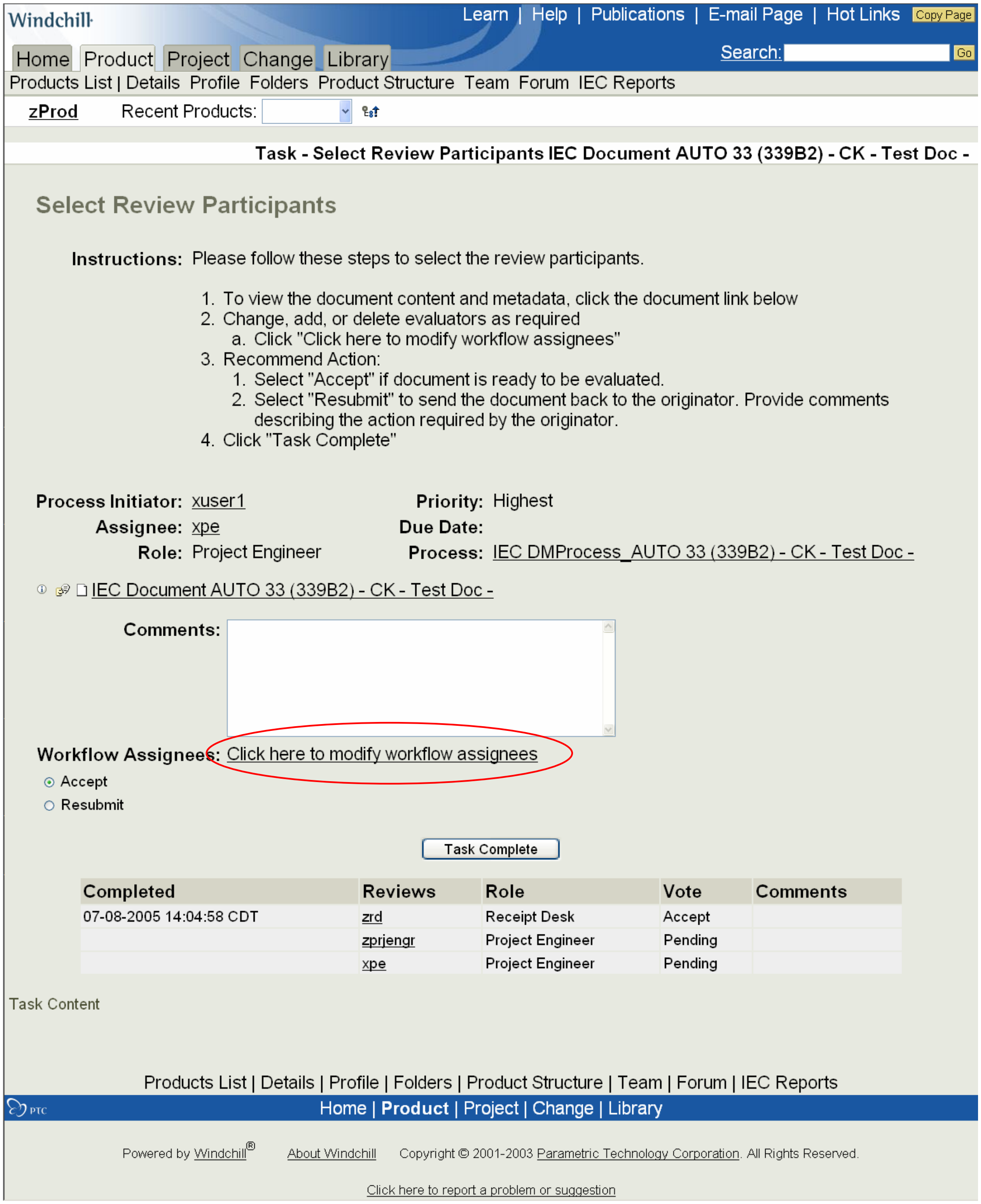
STEP 4: The **ACI Representative** has the ability to update the metadata at this point then click the "Task Complete" button to complete the workflow task.

If the document is rejected by any of the Preliminary Reviewers (Receipt Desk, Contracting/Agreement Authorities, or the ACI Rep), the Document Creator will receive a resubmit task and the lifecycle state of the document will be "Rework".

4.2.5 Select Review Participants

Once the Preliminary Review is complete and the document has not been rejected, the Project Engineer will receive a task via email notification to Select Review Participants and enter any comments regarding preparation for the Evaluation process. The appropriate task will also appear in the Assignments table of the Project Engineer under the Home tab.

STEP 1: The **Project Engineer** will click the Task hyperlink in the email notification OR select the "Select Review Participants" task from the **Home** tab, **Overview** page, **Assignments** table to navigate to the following screen:



Select Review Participants Task Page

STEP 2: The **Project Engineer** will assign a Data Package Engineer, Mandatory, and Optional Evaluators by clicking the Workflow Assignees link as indicated above. From this link, all team members can be viewed and selected as a review participant.

STEP 3: The **Project Engineer** will enter any necessary comments, and choose the “Accept” or “Resubmit” radio button.

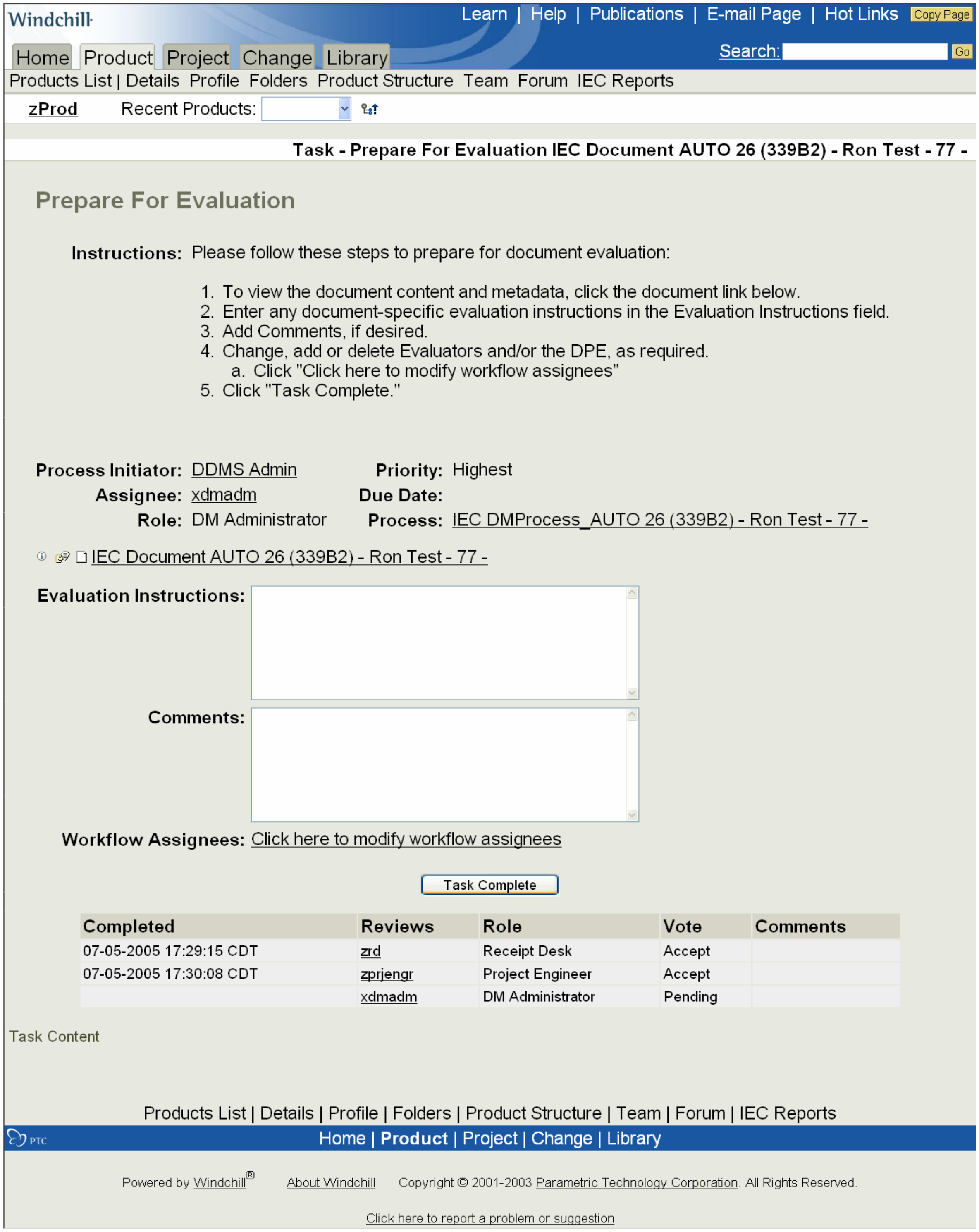
STEP 4: The **Project Engineer** will then click the "Task Complete" button to complete the workflow task.

NOTE: Only DDMS Project or Product Team Members may be selected to be a Review Participant. If the Project Engineer would like to select a user to be a review participant and that user is not a team member, the user must be invited to the DDMS Project or Product by the DDMS Project Manager.

4.2.6 Prepare for Evaluation

After the Project Engineer has selected the Review Participants including the Data Package Engineer (DPE), the DM Administrator will receive a workflow task via email notification to prepare the document for Evaluation. The appropriate task will also appear in the Assignments table of the DM Administrator under the Home tab.

STEP 1: The **DM Administrator** will click the Task hyperlink in the email notification OR select the "Prepare for Evaluation" task from the **Home** tab, **Overview** page, **Assignments** table.



Prepare for Evaluation Task Page

STEP 2: The **DM Administrator** may review the document by clicking on the document hyperlink. The DM Administrator will then click on the Workflow Assignees link to verify the Mandatory and Optional Evaluators and the DPE that have been assigned by the Project Engineer, provide evaluation instructions (due dates, etc.), and any record any other comments. From the Workflow Assignees link, the DM

Administrator may add or remove mandatory or optional reviewers and select the DPE if not previously assigned by the Project Engineer. Note: The DM Administrator's Evaluation Instructions will be shown on the evaluators' task page and the DPE's consolidate task page.

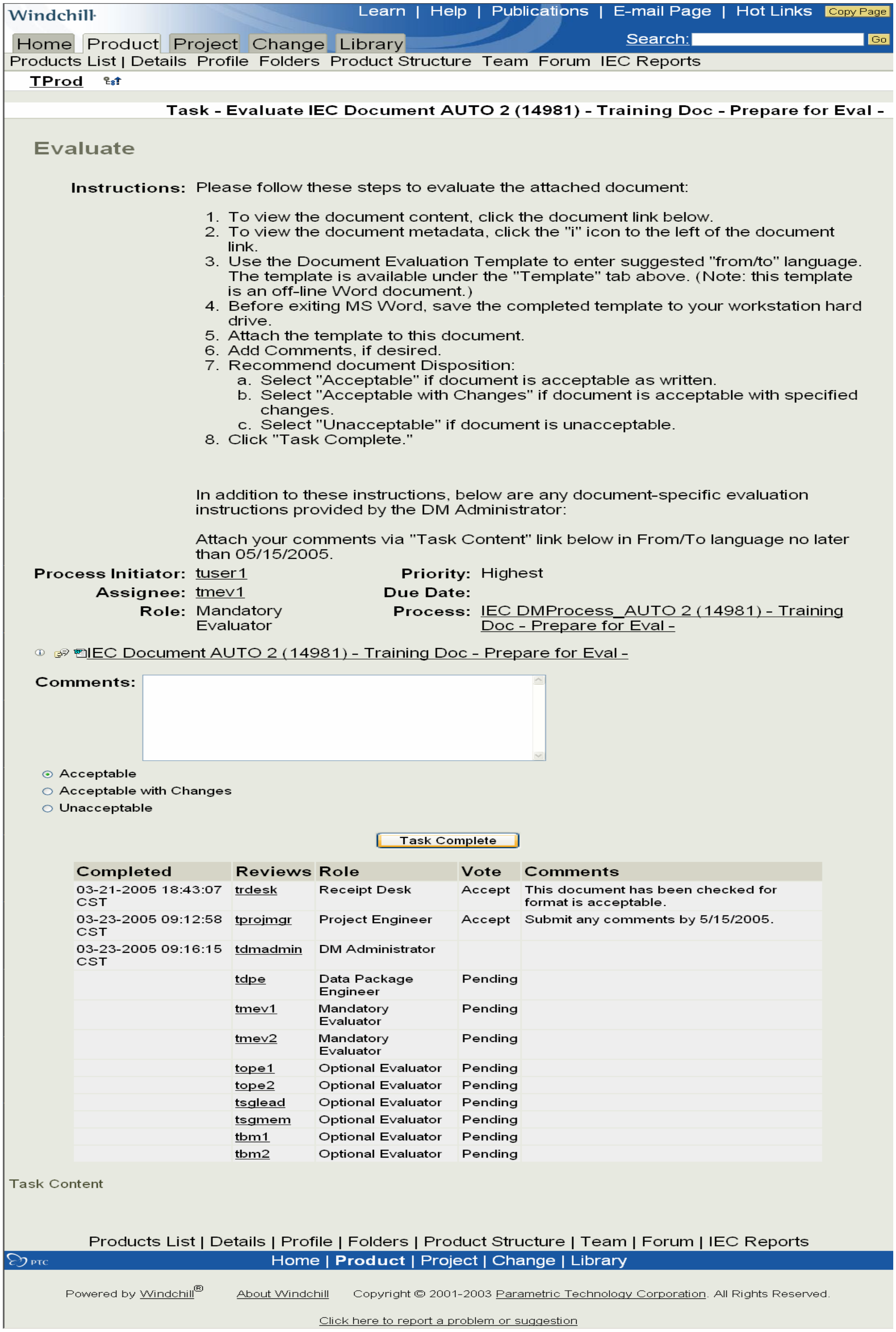
STEP 3: The **DM Administrator** will then click the "Task Complete" button to complete the workflow task.

If the Project Engineer and the DM Administrator do not assign a DPE for the Document, the DM Administrator will receive a task to "Prepare for Evaluation – Please Assign DPE" to ensure that someone has been assigned to consolidate comments and recommend a disposition.

4.2.7 Evaluate

At this time in the document management process, the evaluation of the document will begin. Mandatory and Optional Evaluators that were chosen by the Project Engineer and/or DM Administrator will receive a workflow task via email notification. The appropriate task will also be available in the Assignments table of the evaluators and the DPE under the Home tab.

STEP 1: The **Mandatory or Optional Evaluator** will click the Task hyperlink in the email notification OR select the "Evaluate" task from the **Home** tab, **Overview** page, **Assignments** table.



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TProd

Task - Evaluate IEC Document AUTO 2 (14981) - Training Doc - Prepare for Eval -

Evaluate

Instructions: Please follow these steps to evaluate the attached document:

1. To view the document content, click the document link below.
2. To view the document metadata, click the "i" icon to the left of the document link.
3. Use the Document Evaluation Template to enter suggested "from/to" language. The template is available under the "Template" tab above. (Note: this template is an off-line Word document.)
4. Before exiting MS Word, save the completed template to your workstation hard drive.
5. Attach the template to this document.
6. Add Comments, if desired.
7. Recommend document Disposition:
   a. Select "Acceptable" if document is acceptable as written.
   b. Select "Acceptable with Changes" if document is acceptable with specified changes.
   c. Select "Unacceptable" if document is unacceptable.
8. Click "Task Complete."

In addition to these instructions, below are any document-specific evaluation instructions provided by the DM Administrator:

Attach your comments via "Task Content" link below in From/To language no later than 05/15/2005.

Process Initiator: tuser1 **Priority:** Highest

Assignee: tmev1 **Due Date:**

Role: Mandatory Evaluator **Process:** IEC DMProcess_AUTO 2 (14981) - Training Doc - Prepare for Eval -

IEC Document AUTO 2 (14981) - Training Doc - Prepare for Eval -

Comments:

Acceptable
Acceptable with Changes
Unacceptable

Task Complete

Completed	Reviews	Role	Vote	Comments
03-21-2005 18:43:07 CST	trdesk	Receipt Desk	Accept	This document has been checked for format is acceptable.
03-23-2005 09:12:58 CST	tprojmgr	Project Engineer	Accept	Submit any comments by 5/15/2005.
03-23-2005 09:16:15 CST	tdmadmin	DM Administrator		
	tdpe	Data Package Engineer	Pending	
	tmev1	Mandatory Evaluator	Pending	
	tmev2	Mandatory Evaluator	Pending	
	tope1	Optional Evaluator	Pending	
	tope2	Optional Evaluator	Pending	
	tsglead	Optional Evaluator	Pending	
	tsgmem	Optional Evaluator	Pending	
	tbm1	Optional Evaluator	Pending	
	tbm2	Optional Evaluator	Pending	

Task Content

Products List | Details | Profile | Folders | Product Structure | Team | Forum | IEC Reports

PTC Home | Product | Project | Change | Library

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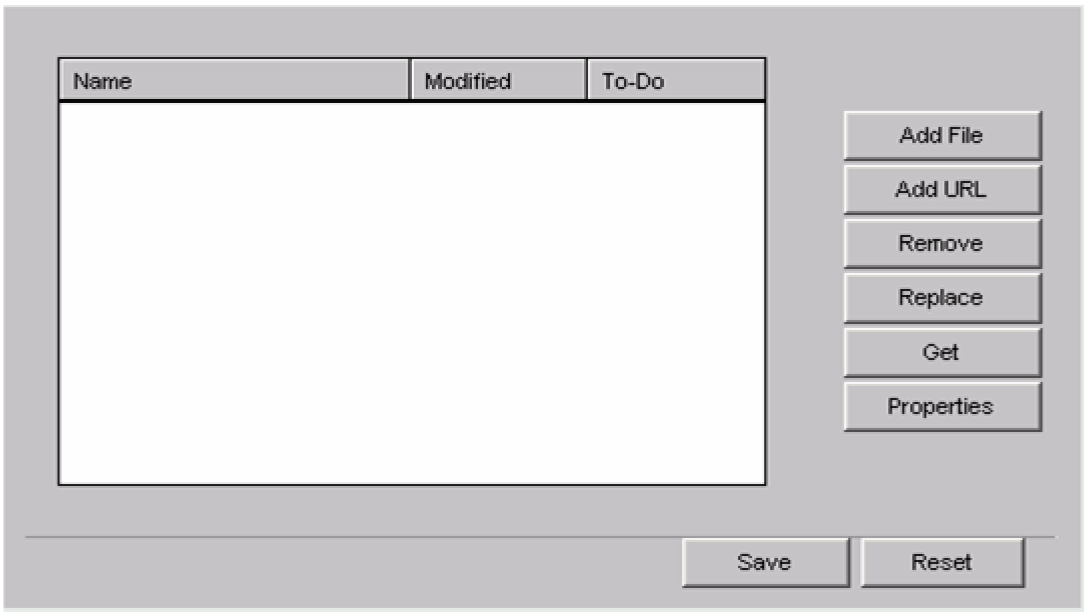
Click here to report a problem or suggestion

Evaluate Task Page

STEP 2: The **Mandatory or Optional Evaluator** will review the document by clicking the document hyperlink and will return to this workflow task page to enter any comments (2000 character limit). The Evaluator may choose to attach a file (e.g. comments) via the "Task Content" link at the bottom of all task pages as follows:

After clicking the "Task Content" link, the user will see the following applet to upload the file.



Task Content Link Applet

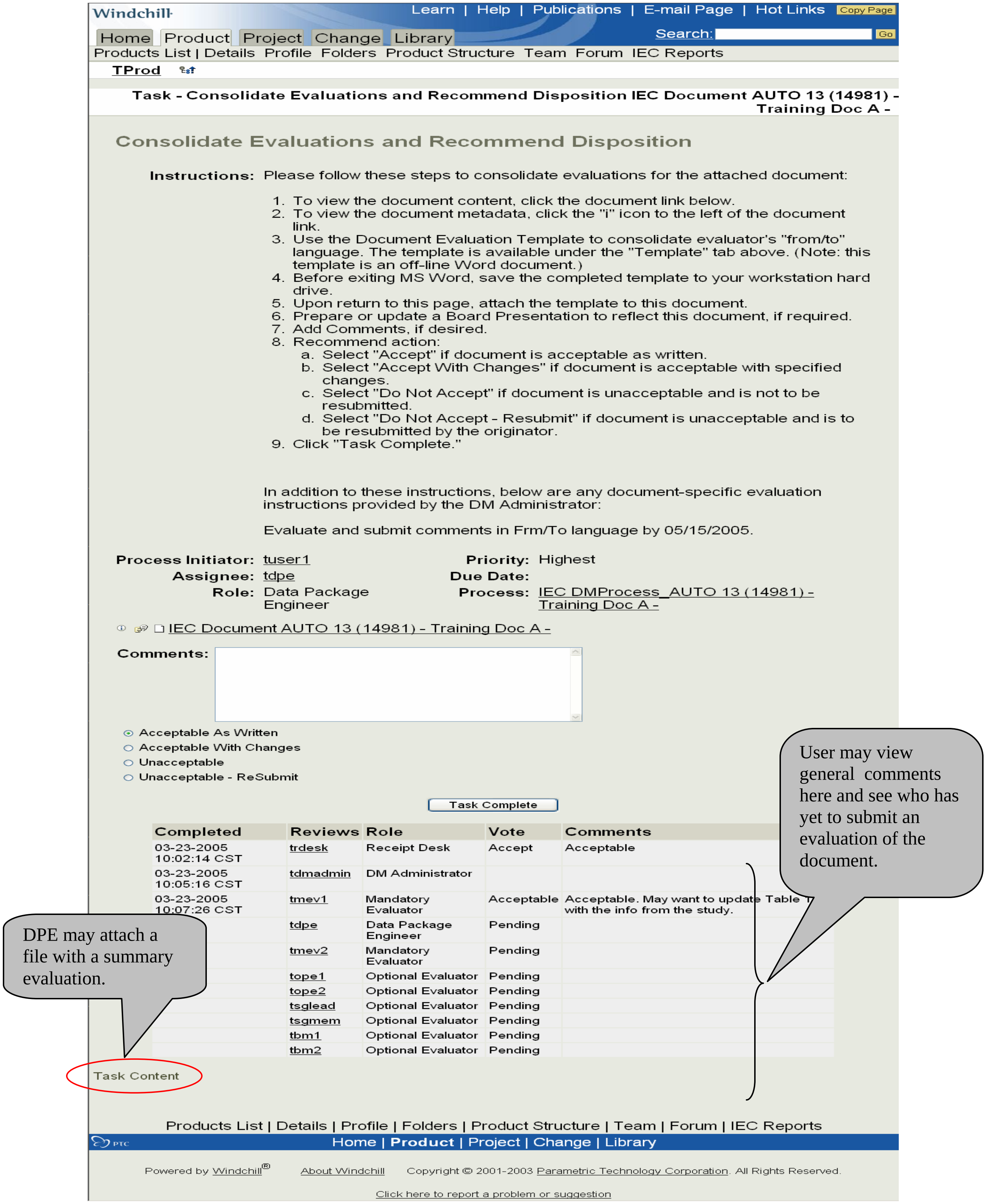
The **Evaluator** will click the "Add File" button, and then browse to find the appropriate file. Once the file has been added, click on the file name, then click "Save". To complete the review, the Evaluator will select the "Acceptable", "Acceptable with Changes", or "Unacceptable" radio button. If the document is anything but acceptable, comments are required.

STEP 3: The **Mandatory or Optional Evaluator** will click the "Task Complete" button to complete the workflow task.

4.2.8 Consolidate Evaluations and Recommend Disposition

Concurrently with the Mandatory and Optional Evaluators, the Data Package Engineer (DPE) will receive a workflow task via email notification to consolidate the evaluations and recommend a disposition to the Board. All evaluations will be shown at the bottom of this task page. The DPE has the option of reviewing each evaluator's comments or completing the consolidation task immediately.

STEP 1: The **DPE** will click the Task hyperlink in the email notification OR select the "Consolidate Evaluations and Recommend Disposition" task from the **Home** tab, **Overview** page, **Assignments** table.



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Task - Consolidate Evaluations and Recommend Disposition IEC Document AUTO 13 (14981) - Training Doc A -

Consolidate Evaluations and Recommend Disposition

Instructions: Please follow these steps to consolidate evaluations for the attached document:

1. To view the document content, click the document link below.
2. To view the document metadata, click the "i" icon to the left of the document link.
3. Use the Document Evaluation Template to consolidate evaluator's "from/to" language. The template is available under the "Template" tab above. (Note: this template is an off-line Word document.)
4. Before exiting MS Word, save the completed template to your workstation hard drive.
5. Upon return to this page, attach the template to this document.
6. Prepare or update a Board Presentation to reflect this document, if required.
7. Add Comments, if desired.
8. Recommend action:
   a. Select "Accept" if document is acceptable as written.
   b. Select "Accept With Changes" if document is acceptable with specified changes.
   c. Select "Do Not Accept" if document is unacceptable and is not to be resubmitted.
   d. Select "Do Not Accept - Resubmit" if document is unacceptable and is to be resubmitted by the originator.
9. Click "Task Complete."

In addition to these instructions, below are any document-specific evaluation instructions provided by the DM Administrator:

Evaluate and submit comments in Frm/To language by 05/15/2005.

Process Initiator: tuser1 **Priority:** Highest
Assignee: tdpe **Due Date:**
Role: Data Package Engineer **Process:** IEC DMProcess_AUTO 13 (14981) - Training Doc A -

IEC Document AUTO 13 (14981) - Training Doc A -

Comments:

- Acceptable As Written
- Acceptable With Changes
- Unacceptable
- Unacceptable - ReSubmit

Task Complete

Completed	Reviews	Role	Vote	Comments
03-23-2005 10:02:14 CST	trdesk	Receipt Desk	Accept	Acceptable
03-23-2005 10:05:16 CST	tdmadmin	DM Administrator		
03-23-2005 10:07:26 CST	tmev1	Mandatory Evaluator	Acceptable	Acceptable. May want to update Table 1 with the info from the study.
	tdpe	Data Package Engineer	Pending	
	tmev2	Mandatory Evaluator	Pending	
	tope1	Optional Evaluator	Pending	
	tope2	Optional Evaluator	Pending	
	tsglead	Optional Evaluator	Pending	
	tsgmem	Optional Evaluator	Pending	
	tbm1	Optional Evaluator	Pending	
	tbm2	Optional Evaluator	Pending	

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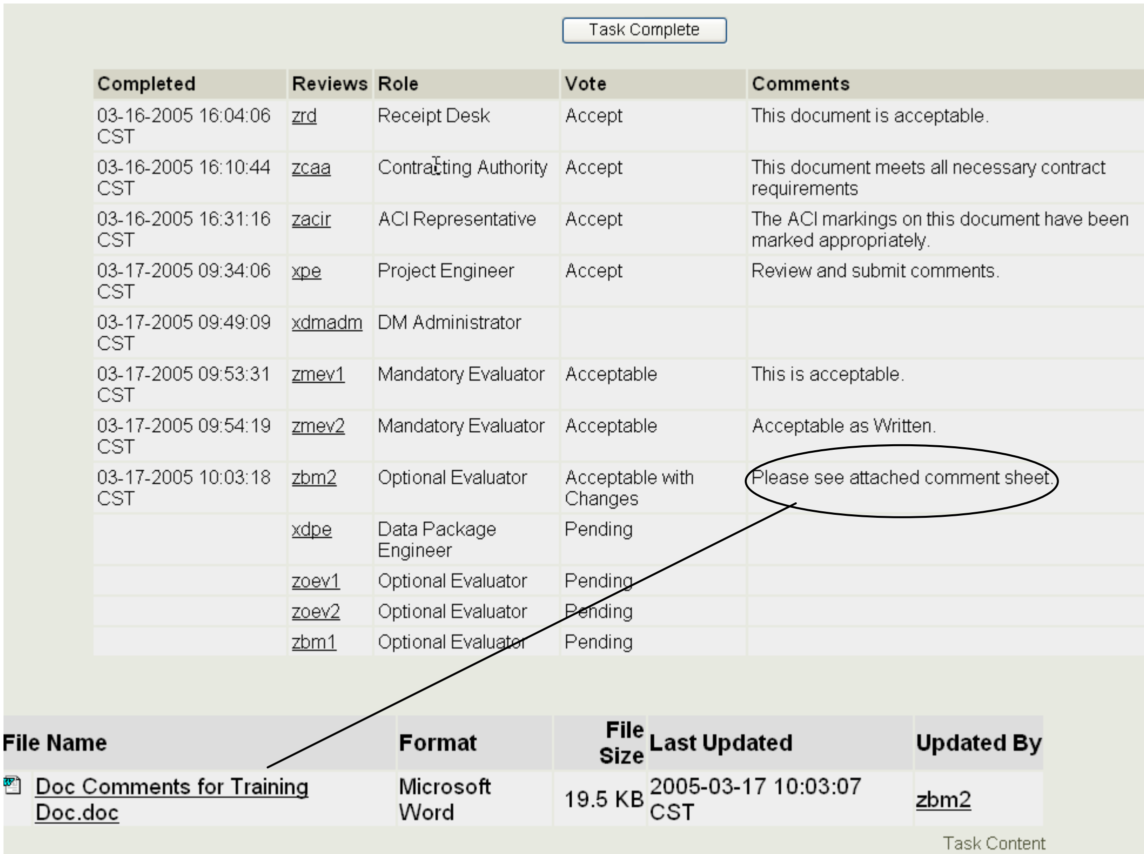
Consolidate Evaluations and Recommend Disposition

STEP 2: The **DPE** will review the document by clicking the document hyperlink. He or she can view previously submitted evaluations by reviewing the comment history and any attachments on the bottom of the task page. This page will provide the Comment History table where every evaluator's comments can be viewed and all attached comments will be found at the bottom of this table as shown below:


Task Complete

Completed	Reviews	Role	Vote	Comments
03-16-2005 16:04:06 CST	zrd	Receipt Desk	Accept	This document is acceptable.
03-16-2005 16:10:44 CST	zcaa	Contracting Authority	Accept	This document meets all necessary contract requirements
03-16-2005 16:31:16 CST	zacir	ACI Representative	Accept	The ACI markings on this document have been marked appropriately.
03-17-2005 09:34:06 CST	xpe	Project Engineer	Accept	Review and submit comments.
03-17-2005 09:49:09 CST	xdmadm	DM Administrator		
03-17-2005 09:53:31 CST	zmev1	Mandatory Evaluator	Acceptable	This is acceptable.
03-17-2005 09:54:19 CST	zmev2	Mandatory Evaluator	Acceptable	Acceptable as Written.
03-17-2005 10:03:18 CST	zbm2	Optional Evaluator	Acceptable with Changes	Please see attached comment sheet.
	xdpe	Data Package Engineer	Pending	
	zoev1	Optional Evaluator	Pending	
	zoev2	Optional Evaluator	Pending	
	zbm1	Optional Evaluator	Pending	

File Name	Format	File Size	Last Updated	Updated By
Doc Comments for Training Doc.doc	Microsoft Word	19.5 KB	2005-03-17 10:03:07 CST	zbm2

Task Content

Evaluators Comments and Attachments

STEP 3: The **DPE** should then return to the task page to enter the consolidated comments and select the “Acceptable as Written”, “Acceptable with Changes”, “Unacceptable”, or “Unacceptable – Resubmit” radio button. If the document is given a disposition of anything other than Acceptable, comments are required.

STEP 4: The **DPE** may attach the consolidated evaluation by using the “Task Content” link and following the instructions on adding a file as described above in Section 4.2.7 Step 2.

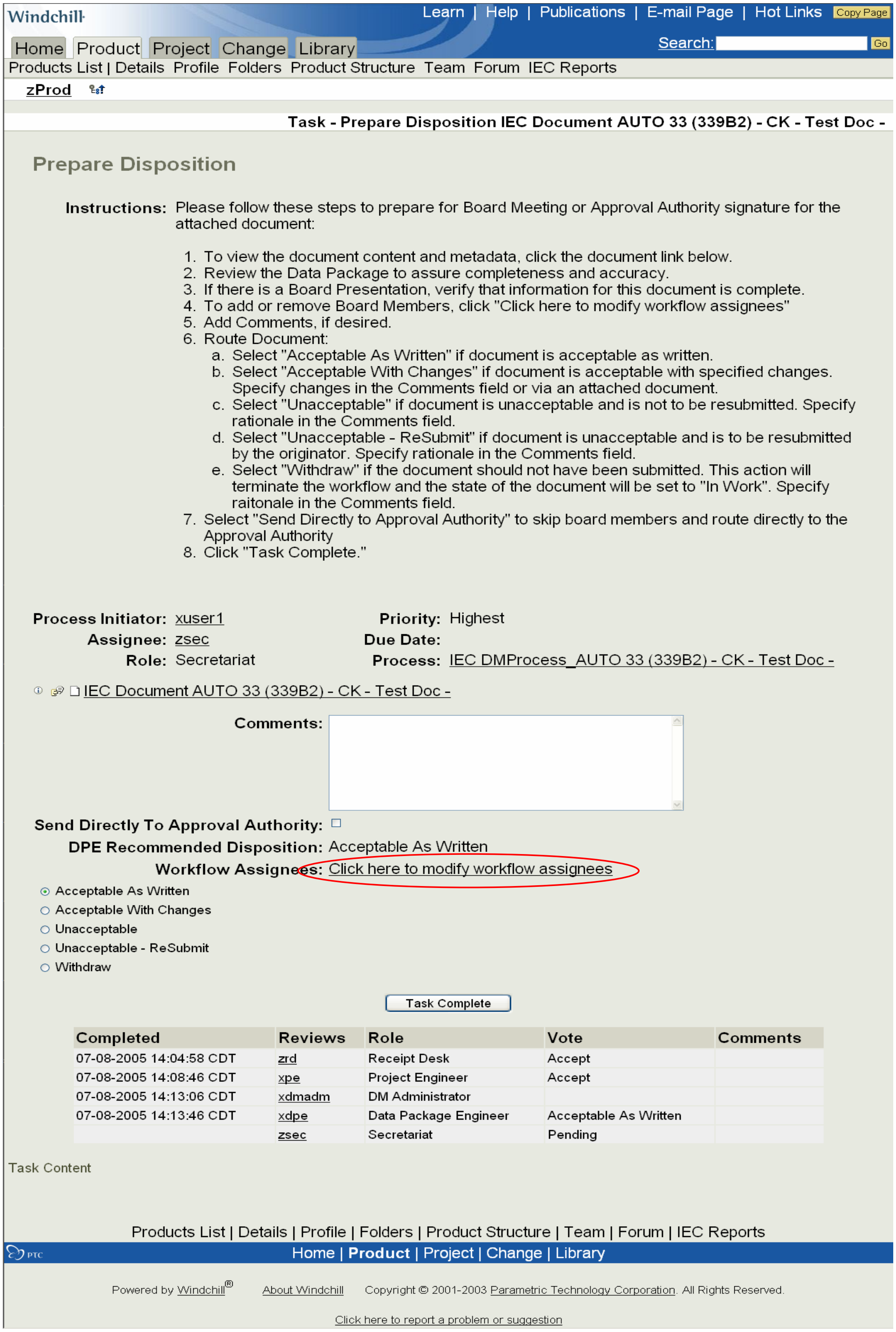
STEP 5: The **DPE** will click the “Task Complete” button to complete the workflow task. Once the DPE’s consolidated evaluation task is completed, any outstanding evaluations will be terminated and removed from each Evaluator’s Assignments table.

NOTE: If an External Category 1 or a Contractor-Produced Type 1 or 2 Document has been re-submitted and the Receipt Desk has determined that undirected changes have been made, the DPE will receive an "Evaluate Re-submittal" task in the Finalization Check lifecycle state. A re-submittal would be needed to finalize the review process.

4.2.9 Prepare Disposition

Once the Document has completed the Evaluation process, it will proceed to the Disposition Prep state. The Secretariat will receive a workflow task via email notification to prepare the disposition. The appropriate task will also appear in the Assignments table of the Secretariat under the Home tab.

STEP 1: The **Secretariat** will click the Task hyperlink in the email notification OR select the "Prepare Disposition" task from the **Home** tab, **Overview** page, **Assignments** table.



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zProd

Task - Prepare Disposition IEC Document AUTO 33 (339B2) - CK - Test Doc -

Prepare Disposition

Instructions: Please follow these steps to prepare for Board Meeting or Approval Authority signature for the attached document:

1. To view the document content and metadata, click the document link below.
2. Review the Data Package to assure completeness and accuracy.
3. If there is a Board Presentation, verify that information for this document is complete.
4. To add or remove Board Members, click "Click here to modify workflow assignees"
5. Add Comments, if desired.
6. Route Document:
   a. Select "Acceptable As Written" if document is acceptable as written.
   b. Select "Acceptable With Changes" if document is acceptable with specified changes. Specify changes in the Comments field or via an attached document.
   c. Select "Unacceptable" if document is unacceptable and is not to be resubmitted. Specify rationale in the Comments field.
   d. Select "Unacceptable - ReSubmit" if document is unacceptable and is to be resubmitted by the originator. Specify rationale in the Comments field.
   e. Select "Withdraw" if the document should not have been submitted. This action will terminate the workflow and the state of the document will be set to "In Work". Specify raitonale in the Comments field.
7. Select "Send Directly to Approval Authority" to skip board members and route directly to the Approval Authority
8. Click "Task Complete."

Process Initiator: xuser1
Assignee: zsec
Role: Secretariat
Priority: Highest
Due Date:
Process: IEC DMProcess_AUTO 33 (339B2) - CK - Test Doc -

IEC Document AUTO 33 (339B2) - CK - Test Doc -

Comments:

Send Directly To Approval Authority:
DPE Recommended Disposition: Acceptable As Written
Workflow Assignees: Click here to modify workflow assignees

- Acceptable As Written
- Acceptable With Changes
- Unacceptable
- Unacceptable - ReSubmit
- Withdraw

Task Complete

Completed	Reviews	Role	Vote	Comments
07-08-2005 14:04:58 CDT	zrd	Receipt Desk	Accept	
07-08-2005 14:08:46 CDT	xpe	Project Engineer	Accept	
07-08-2005 14:13:06 CDT	xdmadm	DM Administrator		
07-08-2005 14:13:46 CDT	xdpe	Data Package Engineer	Acceptable As Written	
	zsec	Secretariat	Pending	

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Prepare Disposition Task Page

STEP 2: The **Secretariat** should create the Board Agenda and distribute to all the Board members and the Board Chair. The **Secretariat** may choose to attach this agenda on the "Prepare Disposition" task page by using the "Task Content" link (see Section 4.2.7 Step 2).

STEP 3: The **Secretariat** will verify the Board Members and Board Chair and assign any new members by selecting the Workflow Assignees link as indicated above. From this link, the Secretariat will assign the Board Chair and Board Members that will be responsible for the final disposition of the document.

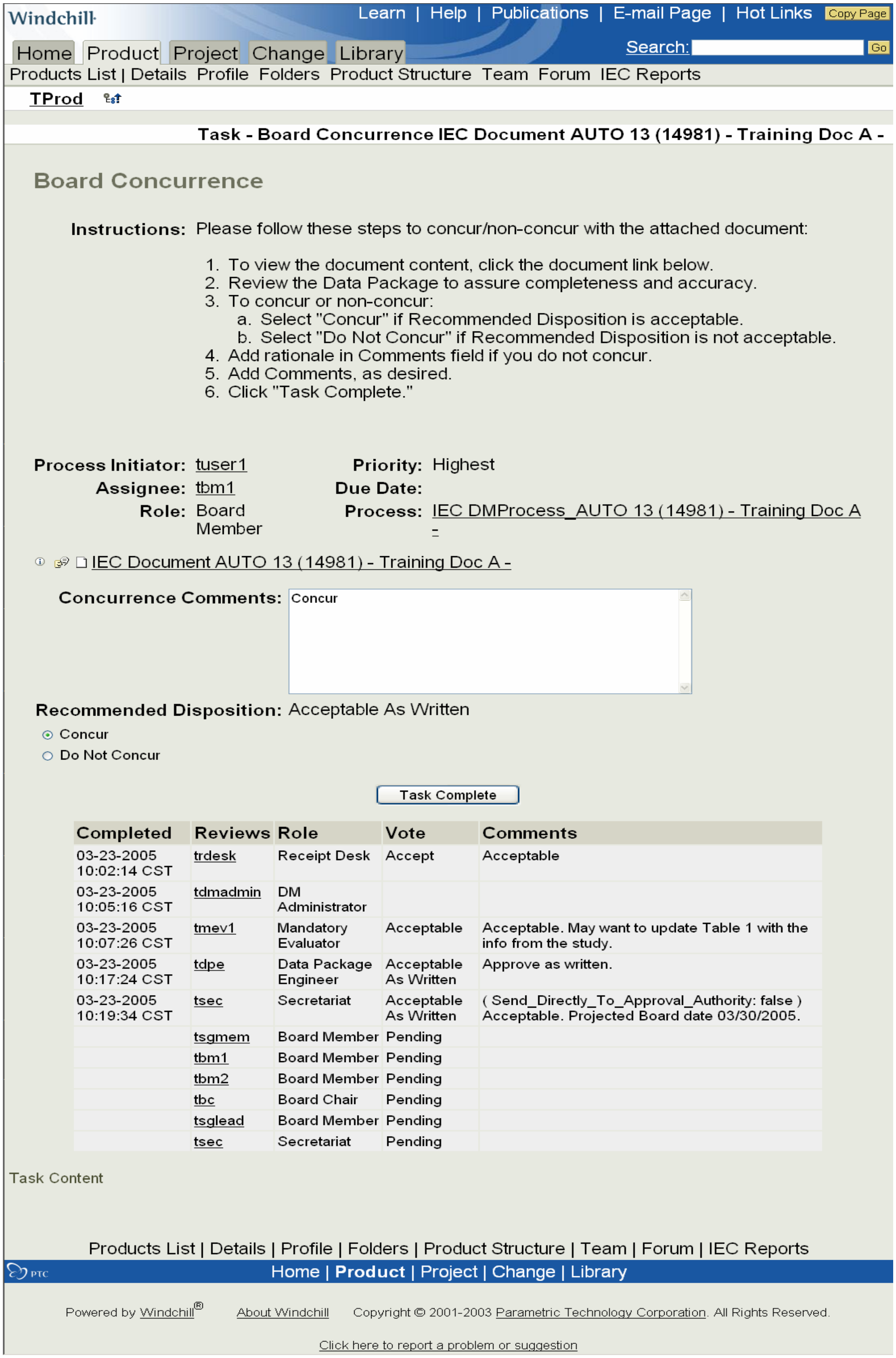
STEP 4: The Secretariat will indicate whether or not the document will be sent directly to the Approval Authority and select the document's disposition from the choices of "Acceptable as Written", "Acceptable with Changes", "Unacceptable", Unacceptable – Resubmit", or Withdraw.

STEP 5: The **Secretariat** will then click the "Task Complete" button to complete the workflow task and submit the document to the Board. The Secretariat will receive a workflow task labeled "Observe Document Approval Activities" to monitor the Board review until the Approval Authority issues a disposition. Once the Approval Authority has given the document a disposition, this workflow activity will be removed from the Secretariat's Assignments Table.

4.2.10 Board Concurrence

During the Board Review, each Board Member will receive a workflow task via email notification to indicate their concurrence or non-concurrence with the recommended disposition entered by the DPE. If the Secretariat has chosen to send the document directly to the Approval Authority in the Disposition Preparation state, the Board Members will not be assigned a workflow task. Reminder: The Board Concurrence may be skipped in the Receiving Lifecycle state to expedite the Review Process.

STEP 1: The **Board Member** will click the Task hyperlink in the email notification OR select the "Board Concurrence" task from the **Home** tab, **Overview** page, **Assignments** table.



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Task - Board Concurrence IEC Document AUTO 13 (14981) - Training Doc A -

Board Concurrence

Instructions: Please follow these steps to concur/non-concur with the attached document:

1. To view the document content, click the document link below.
2. Review the Data Package to assure completeness and accuracy.
3. To concur or non-concur:
   a. Select "Concur" if Recommended Disposition is acceptable.
   b. Select "Do Not Concur" if Recommended Disposition is not acceptable.
4. Add rationale in Comments field if you do not concur.
5. Add Comments, as desired.
6. Click "Task Complete."

Process Initiator: tuser1
Priority: Highest
Assignee: tbm1
Due Date:
Role: Board Member
Process: IEC DMProcess_AUTO 13 (14981) - Training Doc A -

IEC Document AUTO 13 (14981) - Training Doc A -

Concurrence Comments: Concur

Recommended Disposition: Acceptable As Written

- Concur
- Do Not Concur

Task Complete

Completed	Reviews	Role	Vote	Comments
03-23-2005 10:02:14 CST	trdesk	Receipt Desk	Accept	Acceptable
03-23-2005 10:05:16 CST	tdmadmin	DM Administrator		
03-23-2005 10:07:26 CST	tmev1	Mandatory Evaluator	Acceptable	Acceptable. May want to update Table 1 with the info from the study.
03-23-2005 10:17:24 CST	tdpe	Data Package Engineer	Acceptable As Written	Approve as written.
03-23-2005 10:19:34 CST	tsec	Secretariat	Acceptable As Written	(Send_Directly_To_Approval_Authority: false) Acceptable. Projected Board date 03/30/2005.
	tsgmem	Board Member	Pending	
	tbm1	Board Member	Pending	
	tbm2	Board Member	Pending	
	tbc	Board Chair	Pending	
	tsglead	Board Member	Pending	
	tsec	Secretariat	Pending	

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Board Concurrence Task Page

STEP 2: The **Board Member** will review the document via the document hyperlink and select the “Concur” or “Do Not Concur” radio button. If a Board Member does not concur with the recommended disposition, the workflow task requires comments.

STEP 3: The **Board Member** will click the “Task Complete” button to complete the workflow task.

4.2.11 Document Disposition

During the end of the evaluation process, the Board Chair will receive a task via email notification to disposition the document. The appropriate task will also appear in the Assignments table of the Board Chair under the Home tab. At the bottom of the task screen is a list of pending evaluations. This table will be updated as pending evaluations are completed, the task is reopened, or the screen is refreshed.

STEP 1: The **Board Chair** will click the Task hyperlink in the email notification OR select the “Document Disposition” task from the **Home** tab, **Overview** page, **Assignments** table.

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Task - Document Disposition IEC Document AUTO 13 (14981) - Training Doc A -

Document Disposition

Instructions: Please follow these steps to disposition the attached document:

1. To view the document content, click the document link below.
2. Review the Data Package to assure completeness and accuracy.
3. Add Comments, if desired.
4. Disposition:
   a. Select "Approve as Written" if document is marked "Preliminary" but is otherwise acceptable as written. Document will be returned to the contractor for release within the contractor's system and will not be marked as released within DDMS until returned to MSFC.
   b. Select "Approve With Changes" if document is acceptable with specified changes. Specify the changes in the Comments field or via an attached document.
   c. Select "Disapprove" if document is unacceptable and is not to be resubmitted. Specify raitionale in the Comments field.
   d. Select "Disapprove - Resubmit" if document is unacceptable and is to be resubmitted by the originator. Specify rationale in the Comments field.
5. Enter your login password to authenticate disposition of this document.
6. Click "Task Complete."

Process Initiator: tuser1
Assignee: tbc
Role: Board Chair
Priority: Highest
Due Date:
Process: IEC DMProcess_AUTO 13 (14981) - Training Doc A -

IEC Document AUTO 13 (14981) - Training Doc A -

Comments:

Recommended Disposition: Acceptable As Written

- Approve as Written
- Approve With Changes
- Disapprove
- Disapprove - ReSubmit

Additional verification is required to complete this task.

***Password:**

Task Complete

Completed	Reviews	Role	Vote	Comments
03-23-2005 10:02:14 CST	trdesk	Receipt Desk	Accept	Acceptable
03-23-2005 10:05:16 CST	tdmadmin	DM Administrator		
03-23-2005 10:07:26 CST	tmev1	Mandatory Evaluator	Acceptable	Acceptable. May want to update Table 1 with the info from the study.
03-23-2005 10:17:24 CST	tdpe	Data Package Engineer	Acceptable As Written	Approve as written.
03-23-2005 10:19:34 CST	tsec	Secretariat	Acceptable As Written	(Send_Directly_To_Approval_Authority: false) Acceptable. Projected Board date 03/30/2005.
03-23-2005 10:21:38 CST	tbm1	Board Member	Concur	Concur
	tsgmem	Board Member	Pending	
	tbm2	Board Member	Pending	
	tbc	Board Chair	Pending	
	tsglead	Board Member	Pending	
	tsec	Secretariat	Pending	

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Document Disposition Task Page

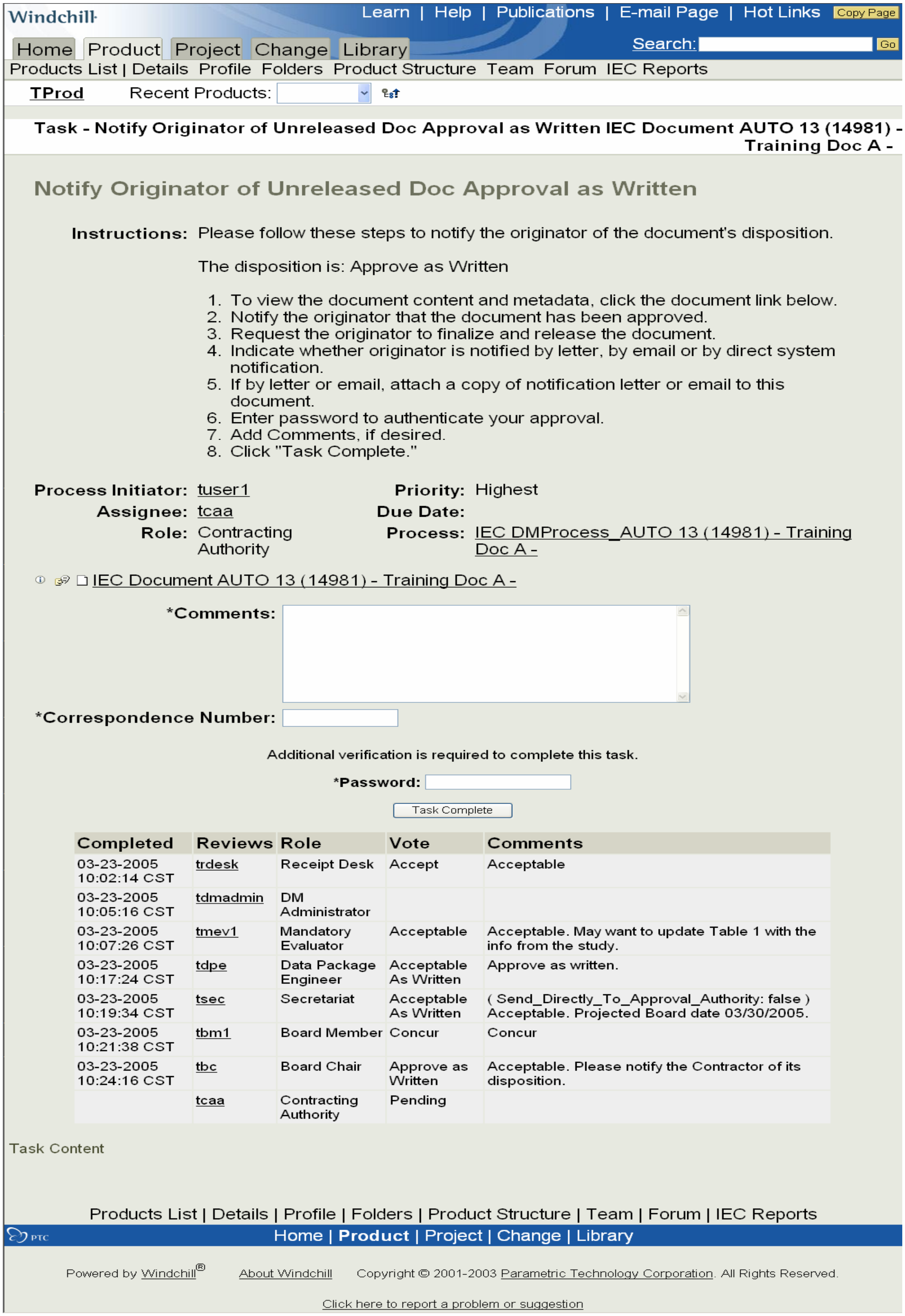
STEP 2: The **Board Chair** will review the document via the document hyperlink and select the appropriate disposition radio button. For dispositions other than Approve, comments are required. In addition, to ensure the authenticity of this disposition, the Board Chair will be required to enter his or her password.

STEP 3: The **Board Chair** will click the "Task Complete" button to complete the workflow task. NOTE: When the Board Chair completes the Document Disposition task, all Board Member concurrence tasks that have not been completed will be terminated.

4.2.12 Notify Originator Of Disposition

If a Contractor-Produced unreleased document is approved by the Board, the Contracting Authority will receive a workflow task via email notification to notify the contractor of the Board's disposition of the document. The task name will indicate the disposition of the document (e.g. "Notify Originator of Unreleased Doc Approved as Written") Otherwise, the Document Creator will receive notification of the document disposition. The appropriate task will also appear in the Assignments table in the Home tab.

STEP 1: The **Contracting/Agreement Authority** will click the Task hyperlink in the email notification OR select the "Notify Originator of Disposition" task from the **Home** tab, **Overview** page, **Assignments** table.



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TProd Recent Products:

Task - Notify Originator of Unreleased Doc Approval as Written IEC Document AUTO 13 (14981) - Training Doc A -

Notify Originator of Unreleased Doc Approval as Written

Instructions: Please follow these steps to notify the originator of the document's disposition.

The disposition is: Approve as Written

1. To view the document content and metadata, click the document link below.
2. Notify the originator that the document has been approved.
3. Request the originator to finalize and release the document.
4. Indicate whether originator is notified by letter, by email or by direct system notification.
5. If by letter or email, attach a copy of notification letter or email to this document.
6. Enter password to authenticate your approval.
7. Add Comments, if desired.
8. Click "Task Complete."

Process Initiator: tuser1
Assignee: tcaa
Role: Contracting Authority
Priority: Highest
Due Date:
Process: IEC DMProcess_AUTO 13 (14981) - Training Doc A -

IEC Document AUTO 13 (14981) - Training Doc A -

***Comments:**

***Correspondence Number:**

Additional verification is required to complete this task.

***Password:**

Task Complete

Completed	Reviews	Role	Vote	Comments
03-23-2005 10:02:14 CST	trdesk	Receipt Desk	Accept	Acceptable
03-23-2005 10:05:16 CST	tdmadmin	DM Administrator		
03-23-2005 10:07:26 CST	tmev1	Mandatory Evaluator	Acceptable	Acceptable. May want to update Table 1 with the info from the study.
03-23-2005 10:17:24 CST	tdpe	Data Package Engineer	Acceptable As Written	Approve as written.
03-23-2005 10:19:34 CST	tsec	Secretariat	Acceptable As Written	(Send_Directly_To_Approval_Authority: false) Acceptable. Projected Board date 03/30/2005.
03-23-2005 10:21:38 CST	tbm1	Board Member	Concur	Concur
03-23-2005 10:24:16 CST	tbc	Board Chair	Approve as Written	Acceptable. Please notify the Contractor of its disposition.
	tcaa	Contracting Authority	Pending	

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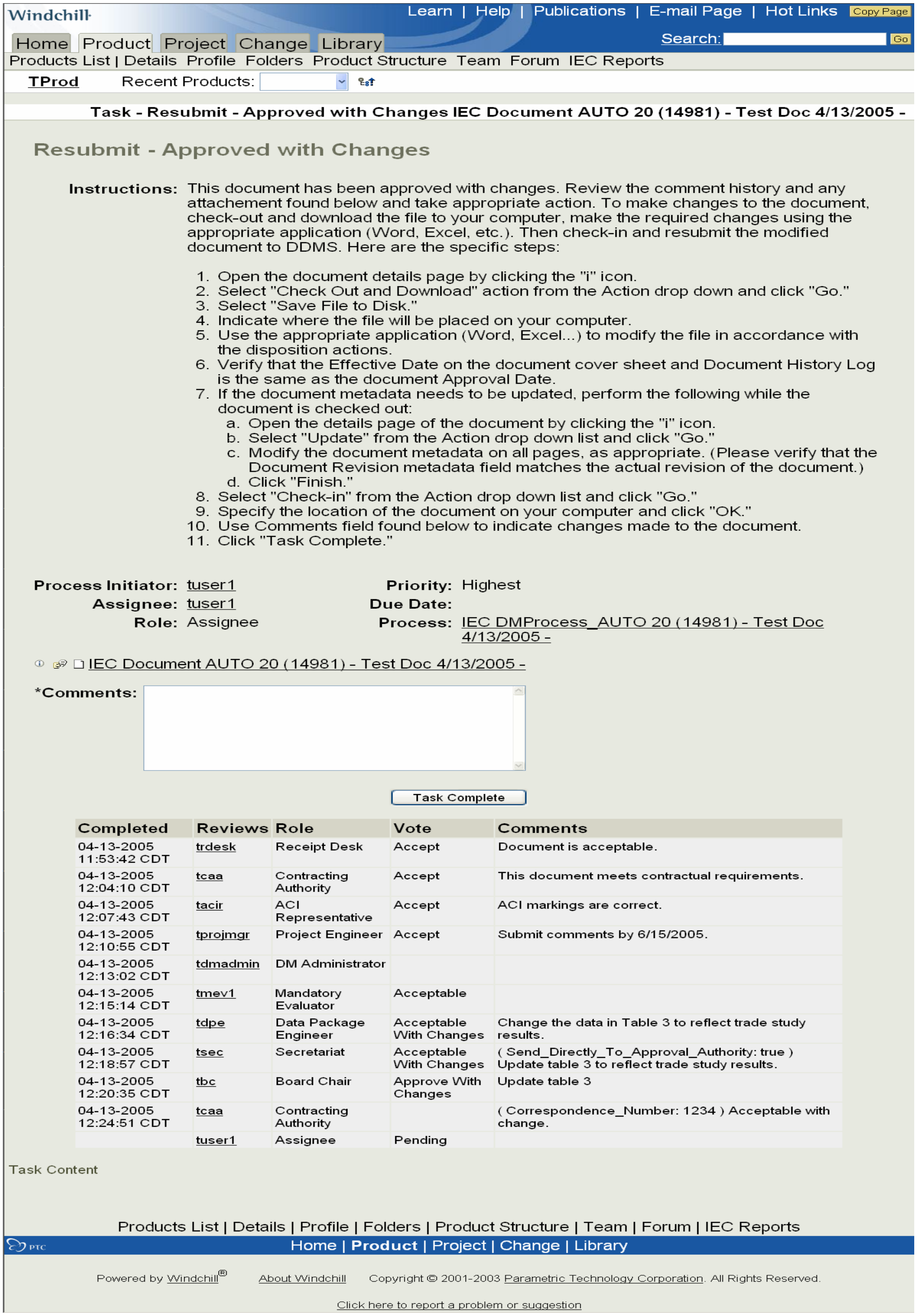
Notify Originator of Disposition Task Page

STEP 2: The **Contracting/Agreement Authority** will notify the originator of the disposition of the document. The Contracting Authority may choose to notify the Originator via email or by using other means. If the email communication is chosen, the Contracting Authority can simply click the email address link of the Process Initiator, and an email message window will appear with the email address automatically filled. The Contracting/Agreement Authority's notification of disposition to the originator can be attached for reference using the "Task Content" link (see Section 4.2.7 Step 2). There is a required field to fill in concerning Correspondence numbers to help track for reference.

STEP 3: The **Contracting Authority** will click the "Task Complete" button to complete the workflow task.

4.2.13 Resubmit/Finalize Document

Depending on the origination and type of the document, the Document Originator will receive a task via email notification to Resubmit (Contractor and External Agency Produced Documents) or Finalize (In-house Produced Documents) the document for approval as shown in the following two screen shots. The appropriate task will also appear in the Assignments table in the Home tab. Using the comments from the review process, the document can be updated until it is re-submitted. To start this process, the Originator would open this workflow task, check-out and download the document, update, check-in and resubmit, and click the "Task Complete" button. Please refer to Section 4.2.1.2 for detailed steps on how to successfully update a document and metadata.



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TProd Recent Products:

Task - Resubmit - Approved with Changes IEC Document AUTO 20 (14981) - Test Doc 4/13/2005 -

Resubmit - Approved with Changes

Instructions: This document has been approved with changes. Review the comment history and any attachement found below and take appropriate action. To make changes to the document, check-out and download the file to your computer, make the required changes using the appropriate application (Word, Excel, etc.). Then check-in and resubmit the modified document to DDMS. Here are the specific steps:

1. Open the document details page by clicking the "i" icon.
2. Select "Check Out and Download" action from the Action drop down and click "Go."
3. Select "Save File to Disk."
4. Indicate where the file will be placed on your computer.
5. Use the appropriate application (Word, Excel...) to modify the file in accordance with the disposition actions.
6. Verify that the Effective Date on the document cover sheet and Document History Log is the same as the document Approval Date.
7. If the document metadata needs to be updated, perform the following while the document is checked out:
   a. Open the details page of the document by clicking the "i" icon.
   b. Select "Update" from the Action drop down list and click "Go."
   c. Modify the document metadata on all pages, as appropriate. (Please verify that the Document Revision metadata field matches the actual revision of the document.)
   d. Click "Finish."
8. Select "Check-in" from the Action drop down list and click "Go."
9. Specify the location of the document on your computer and click "OK."
10. Use Comments field found below to indicate changes made to the document.
11. Click "Task Complete."

Process Initiator: tuser1 **Priority:** Highest
Assignee: tuser1 **Due Date:**
Role: Assignee **Process:** IEC DMProcess_AUTO 20 (14981) - Test Doc 4/13/2005 -

IEC Document AUTO 20 (14981) - Test Doc 4/13/2005 -

***Comments:**

Task Complete

Completed	Reviews	Role	Vote	Comments
04-13-2005 11:53:42 CDT	trdesk	Receipt Desk	Accept	Document is acceptable.
04-13-2005 12:04:10 CDT	tcaa	Contracting Authority	Accept	This document meets contractual requirements.
04-13-2005 12:07:43 CDT	tacir	ACI Representative	Accept	ACI markings are correct.
04-13-2005 12:10:55 CDT	tprojmgr	Project Engineer	Accept	Submit comments by 6/15/2005.
04-13-2005 12:13:02 CDT	tdmadmin	DM Administrator		
04-13-2005 12:15:14 CDT	tmev1	Mandatory Evaluator	Acceptable	
04-13-2005 12:16:34 CDT	tdpe	Data Package Engineer	Acceptable With Changes	Change the data in Table 3 to reflect trade study results.
04-13-2005 12:18:57 CDT	tsec	Secretariat	Acceptable With Changes	(Send_Directly_To_Approval_Authority: true) Update table 3 to reflect trade study results.
04-13-2005 12:20:35 CDT	tbc	Board Chair	Approve With Changes	Update table 3
04-13-2005 12:24:51 CDT	tcaa	Contracting Authority		(Correspondence_Number: 1234) Acceptable with change.
	tuser1	Assignee	Pending	

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Resubmit Document Task Page – Contractor-Produced Document

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TProd Recent Products:

Task - Finalize Document IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Finalize Document

Instructions: Please note that this document has been approved or approved with changes. Review the comment history and any attachements found below and take appropriate action. To make changes to the document, check-out and download the file to your computer, make the required changes using the appropriate application (Word, Excel, etc.). Then check-in and resubmit the modified document to DDMS. Here are the specific steps:

1. Open the document details page by clicking the "i" icon.
2. Select "Check Out and Download" action from the Action drop down and click "Go."
3. Select "Save File to Disk."
4. Indicate where the file will be placed on your computer.
5. Use the appropriate application (Word, Excel...) to modify the file in accordance with the disposition actions.
6. Verify that the Effective Date on the document cover sheet and Document History Log are the same as the document Approval Date.
7. If the document metadata needs to be updated, perform the following while the document is checked out:
   a. Open the details page of the document by clicking the "i" icon.
   b. Select "Update" from the Action drop down list and click "Go."
   c. Modify the document metadata on all pages, as appropriate. (Please verify that the Document Revision metadata field matches the actual revision of the document.)
   d. Click "Finish."
8. Select "Check-in" from the Action drop down list and click "Go."
9. Specify the location of the document on your computer and click "OK."
10. If document requires release through the MSFC Release Desk/Integrated Configuration Management System (ICMS) prepare and attach release forms required in MSFC-STD-555, Section 5.3 (Document Release List, Document Input Record, etc.)
11. Add Comments, if desired.
12. Click "Task Complete."

Process Initiator: tuser1
Assignee: tuser1
Role: Assignee

Priority: Highest
Due Date:
Process: IEC DMProcess_AUTO 14 (14981) - Internal Cat 1 Training Doc -

IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Comments:

Task Complete

Completed	Reviews	Role	Vote	Comments
03-23-2005 18:32:09 CST	trdesk	Receipt Desk	Accept	
03-23-2005 18:35:54 CST	tsec	Secretariat	Acceptable With Changes	(Send_Directly_To_Approval_Authority: false) Document needs to be updated - Table 2. Drawing in Section 3.4 needs to be checked.
03-23-2005 18:37:06 CST	tbc	Board Chair	Approve With Changes	See secretariat comments
	tuser1	Assignee	Pending	

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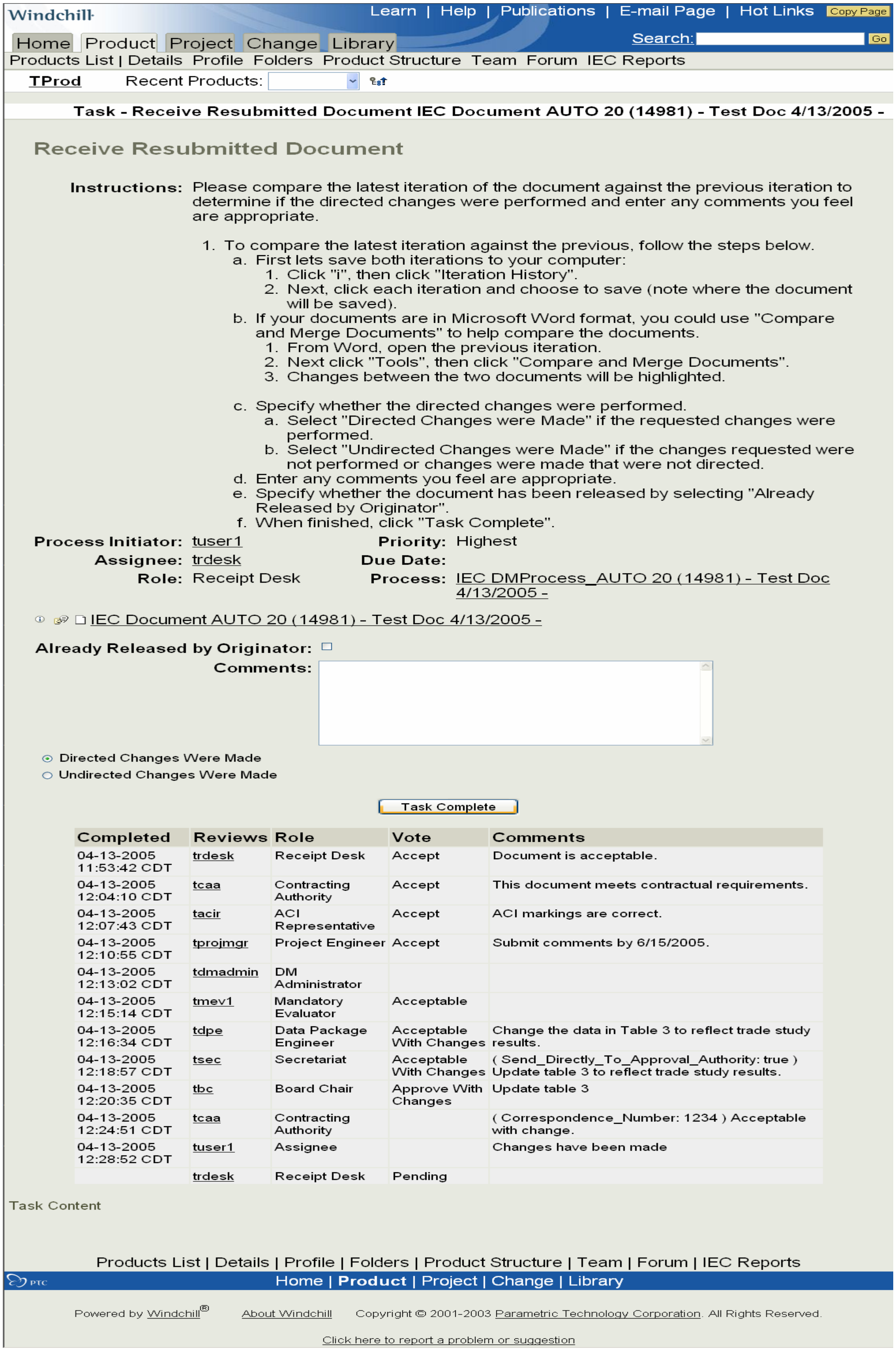
Finalize Document Task Page – In-house Category 1 Document

4.2.14 Receive Resubmitted Document (Contractor or External Agency - Produced Docs)

For Contractor-Produced Type 1 and 2 documents re-submittals, the Receipt Desk will receive a task via email to review the resubmitted document. The task will also appear in the Assignments table of the Receipt Desk under the Home tab. It is in the Finalization Check lifecycle state.

STEP 1: The **Receipt Desk** will click on the task name and the "Receive Resubmitted Document" task page will appear. They will follow the instructions on the task page, choose to select the "Already Released by the Originator" checkbox, if applicable, and verify that no undirected changes were made. If no undirected changes were made, the Receipt Desk selects the appropriate radio button and the document has the state of "Approved". If undirected changes were made, the DPE would receive a workflow task to evaluate the resubmitted document and approve the additional changes.



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Task - Receive Resubmitted Document IEC Document AUTO 20 (14981) - Test Doc 4/13/2005 -

Receive Resubmitted Document

Instructions: Please compare the latest iteration of the document against the previous iteration to determine if the directed changes were performed and enter any comments you feel are appropriate.

1. To compare the latest iteration against the previous, follow the steps below.
   a. First lets save both iterations to your computer:
      1. Click "i", then click "Iteration History".
      2. Next, click each iteration and choose to save (note where the document will be saved).
   b. If your documents are in Microsoft Word format, you could use "Compare and Merge Documents" to help compare the documents.
      1. From Word, open the previous iteration.
      2. Next click "Tools", then click "Compare and Merge Documents".
      3. Changes between the two documents will be highlighted.
   c. Specify whether the directed changes were performed.
      a. Select "Directed Changes were Made" if the requested changes were performed.
      b. Select "Undirected Changes were Made" if the changes requested were not performed or changes were made that were not directed.
   d. Enter any comments you feel are appropriate.
   e. Specify whether the document has been released by selecting "Already Released by Originator".
   f. When finished, click "Task Complete".

Process Initiator: tuser1 **Priority:** Highest
Assignee: trdesk **Due Date:**
Role: Receipt Desk **Process:** IEC DMProcess_AUTO 20 (14981) - Test Doc 4/13/2005 -

IEC Document AUTO 20 (14981) - Test Doc 4/13/2005 -

Already Released by Originator:

Comments:

Directed Changes Were Made
Undirected Changes Were Made

Task Complete

Completed	Reviews	Role	Vote	Comments
04-13-2005 11:53:42 CDT	trdesk	Receipt Desk	Accept	Document is acceptable.
04-13-2005 12:04:10 CDT	tcaa	Contracting Authority	Accept	This document meets contractual requirements.
04-13-2005 12:07:43 CDT	tacir	ACI Representative	Accept	ACI markings are correct.
04-13-2005 12:10:55 CDT	tprojmgr	Project Engineer	Accept	Submit comments by 6/15/2005.
04-13-2005 12:13:02 CDT	tdmadmin	DM Administrator		
04-13-2005 12:15:14 CDT	tmev1	Mandatory Evaluator	Acceptable	
04-13-2005 12:16:34 CDT	tdpe	Data Package Engineer	Acceptable With Changes	Change the data in Table 3 to reflect trade study results.
04-13-2005 12:18:57 CDT	tsec	Secretariat	Acceptable With Changes	(Send_Directly_To_Approval_Authority: true) Update table 3 to reflect trade study results.
04-13-2005 12:20:35 CDT	tbc	Board Chair	Approve With Changes	Update table 3
04-13-2005 12:24:51 CDT	tcaa	Contracting Authority		(Correspondence_Number: 1234) Acceptable with change.
04-13-2005 12:28:52 CDT	tuser1	Assignee		Changes have been made
	trdesk	Receipt Desk	Pending	

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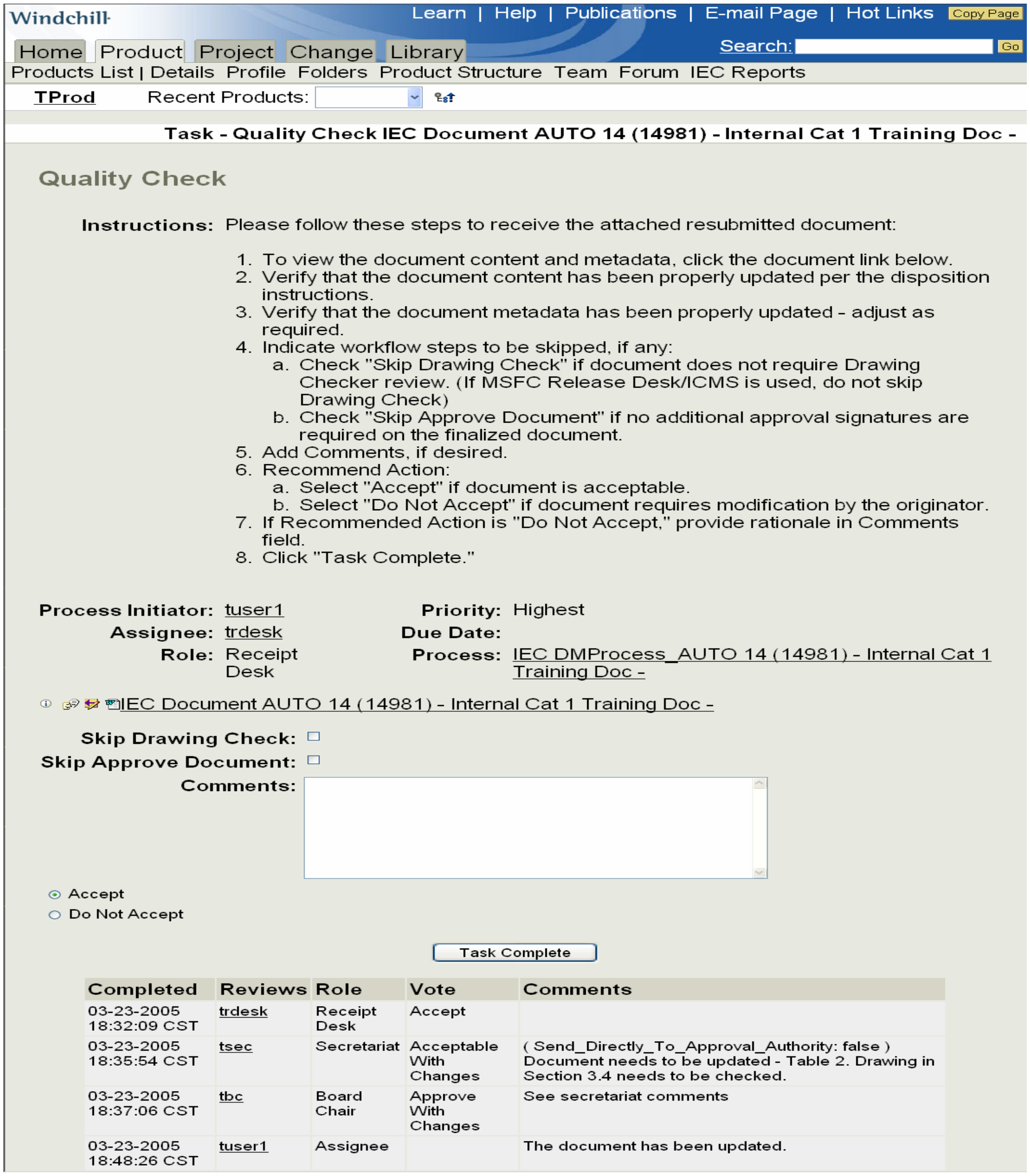
Receive Resubmitted Document Task Page – Contractor-Produced Doc

STEP 2: The **Receipt Desk** will click the "Task Complete" button to complete the workflow task. This will complete the Document Management Workflow for Contractor and External Agency - Produced Documents and the document will have a state of "Approved".

4.2.15 Quality Check (In-house Produced Category 1 Docs)

If the resubmitted document is an In-house Category 1 document, the Receipt Desk will receive a task via email notification to perform a Quality Check on the document. The task will also appear in the Assignments table of the Receipt Desk under the Home tab.

STEP 1: The **Receipt Desk** will click on the task name and the "Quality Check" task page will appear. The Receipt Desk will follow the instructions on the task page and choose to skip the Drawing Checker Review and Approval Signatories if not applicable. If Drawing Checkers and Approval Signatories are required to complete the review of the document, the Receipt Desk will ensure that those roles have been identified by using the applet at the bottom of the task page. The Receipt Desk will also determine if the document will be released through the MSFC Release Desk. If so, the Receipt desk will identify the MSFC Release Representative at this time. The Receipt Desk will then select the "Accept" or "Do Not Accept" radio buttons. Comments are required if the document is unacceptable.



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Task - Quality Check IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Quality Check

Instructions: Please follow these steps to receive the attached resubmitted document:

1. To view the document content and metadata, click the document link below.
2. Verify that the document content has been properly updated per the disposition instructions.
3. Verify that the document metadata has been properly updated - adjust as required.
4. Indicate workflow steps to be skipped, if any:
   a. Check "Skip Drawing Check" if document does not require Drawing Checker review. (If MSFC Release Desk/ICMS is used, do not skip Drawing Check)
   b. Check "Skip Approve Document" if no additional approval signatures are required on the finalized document.
5. Add Comments, if desired.
6. Recommend Action:
   a. Select "Accept" if document is acceptable.
   b. Select "Do Not Accept" if document requires modification by the originator.
7. If Recommended Action is "Do Not Accept," provide rationale in Comments field.
8. Click "Task Complete."

Process Initiator: tuser1 **Priority:** Highest
Assignee: trdesk **Due Date:**
Role: Receipt Desk **Process:** IEC DMProcess_AUTO 14 (14981) - Internal Cat 1 Training Doc -

IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Skip Drawing Check:
Skip Approve Document:
Comments:

Accept
Do Not Accept

Task Complete

Completed	Reviews	Role	Vote	Comments
03-23-2005 18:32:09 CST	trdesk	Receipt Desk	Accept	
03-23-2005 18:35:54 CST	tsec	Secretariat	Acceptable With Changes	(Send_Directly_To_Approval_Authority: false) Document needs to be updated - Table 2. Drawing in Section 3.4 needs to be checked.
03-23-2005 18:37:06 CST	tbc	Board Chair	Approve With Changes	See secretariat comments
03-23-2005 18:48:26 CST	tuser1	Assignee		The document has been updated.

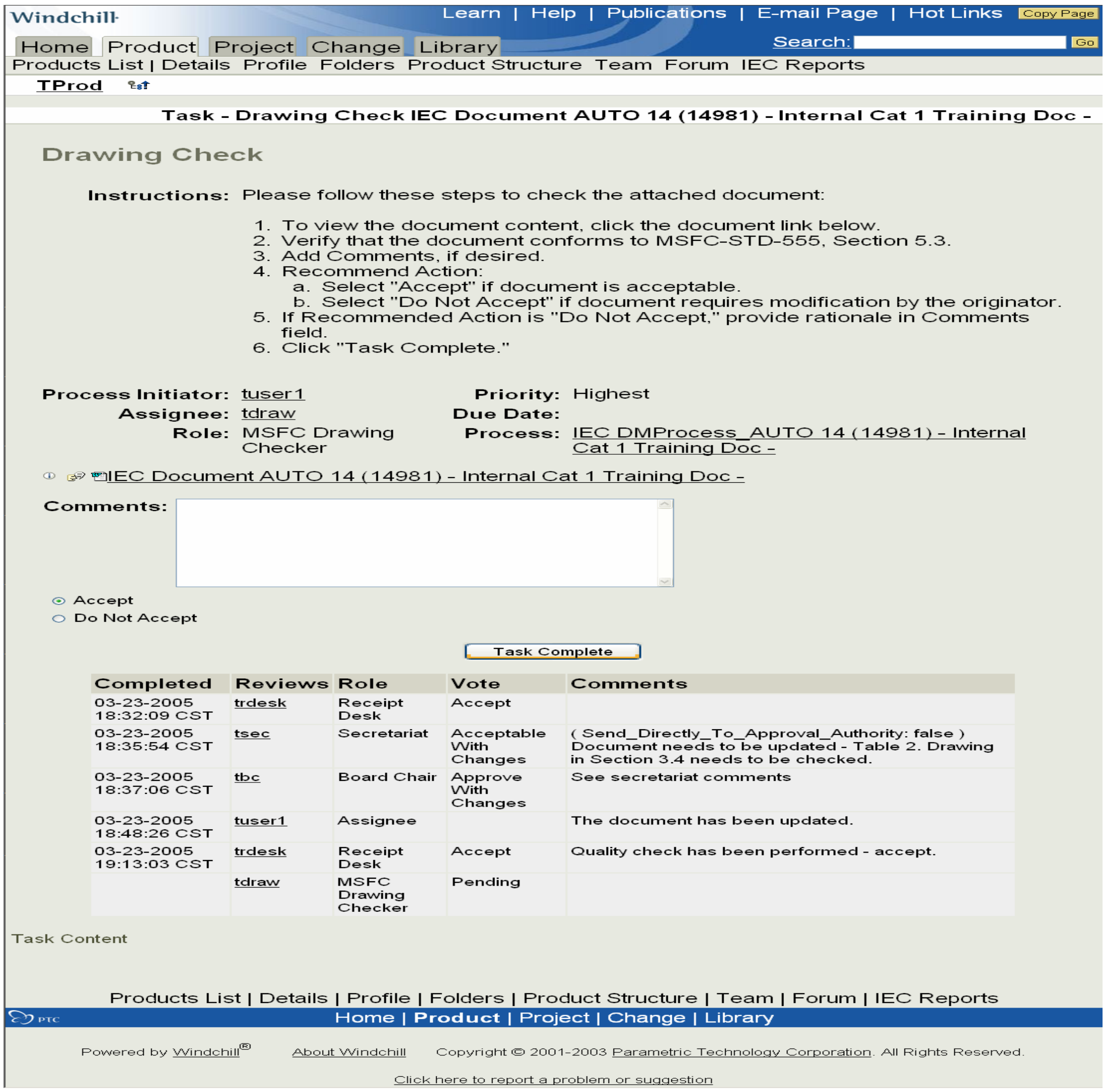
Receipt Desk - Quality Check Task Page – In-house Category 1 Doc

STEP 2: The **Receipt Desk** will click the "Task Complete" button to complete the workflow task.

4.2.16 Drawing Check (In-house Produced Category 1 Docs)

If the Document is an In-house Category 1 document and the Receipt Desk did not elect to skip the Drawing Checker task, the Drawing Checker will receive a task via email notification to perform a Drawing Check on the document. The task will also appear in the Assignments table of the Drawing Checker under the Home tab.

STEP 1: The **Drawing Checker** will click on the task name and the "Drawing Check" task page will appear. They will follow the instructions on the task page, and then select the "Accept" or "Do Not Accept" radio buttons. Comments are required if the document is unacceptable. If the Drawing Checker does not accept the document, the document will go back to the Receipt Desk for another Quality Check. If the Receipt Desk does not accept it, the originator will receive a task to re-work the document.



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Task - Drawing Check IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Drawing Check

Instructions: Please follow these steps to check the attached document:

1. To view the document content, click the document link below.
2. Verify that the document conforms to MSFC-STD-555, Section 5.3.
3. Add Comments, if desired.
4. Recommend Action:
   a. Select "Accept" if document is acceptable.
   b. Select "Do Not Accept" if document requires modification by the originator.
5. If Recommended Action is "Do Not Accept," provide rationale in Comments field.
6. Click "Task Complete."

Process Initiator: tuser1
Assignee: tdraw
Role: MSFC Drawing Checker
Priority: Highest
Due Date:
Process: IEC DMProcess_AUTO 14 (14981) - Internal Cat 1 Training Doc -

IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Comments:

Accept
Do Not Accept

Task Complete

Completed	Reviews	Role	Vote	Comments
03-23-2005 18:32:09 CST	trdesk	Receipt Desk	Accept	
03-23-2005 18:35:54 CST	tsec	Secretariat	Acceptable With Changes	(Send_Directly_To_Approval_Authority: false) Document needs to be updated - Table 2. Drawing in Section 3.4 needs to be checked.
03-23-2005 18:37:06 CST	tbc	Board Chair	Approve With Changes	See secretariat comments
03-23-2005 18:48:26 CST	tuser1	Assignee		The document has been updated.
03-23-2005 19:13:03 CST	trdesk	Receipt Desk	Accept	Quality check has been performed - accept.
	tdraw	MSFC Drawing Checker	Pending	

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Drawing Check Task Page

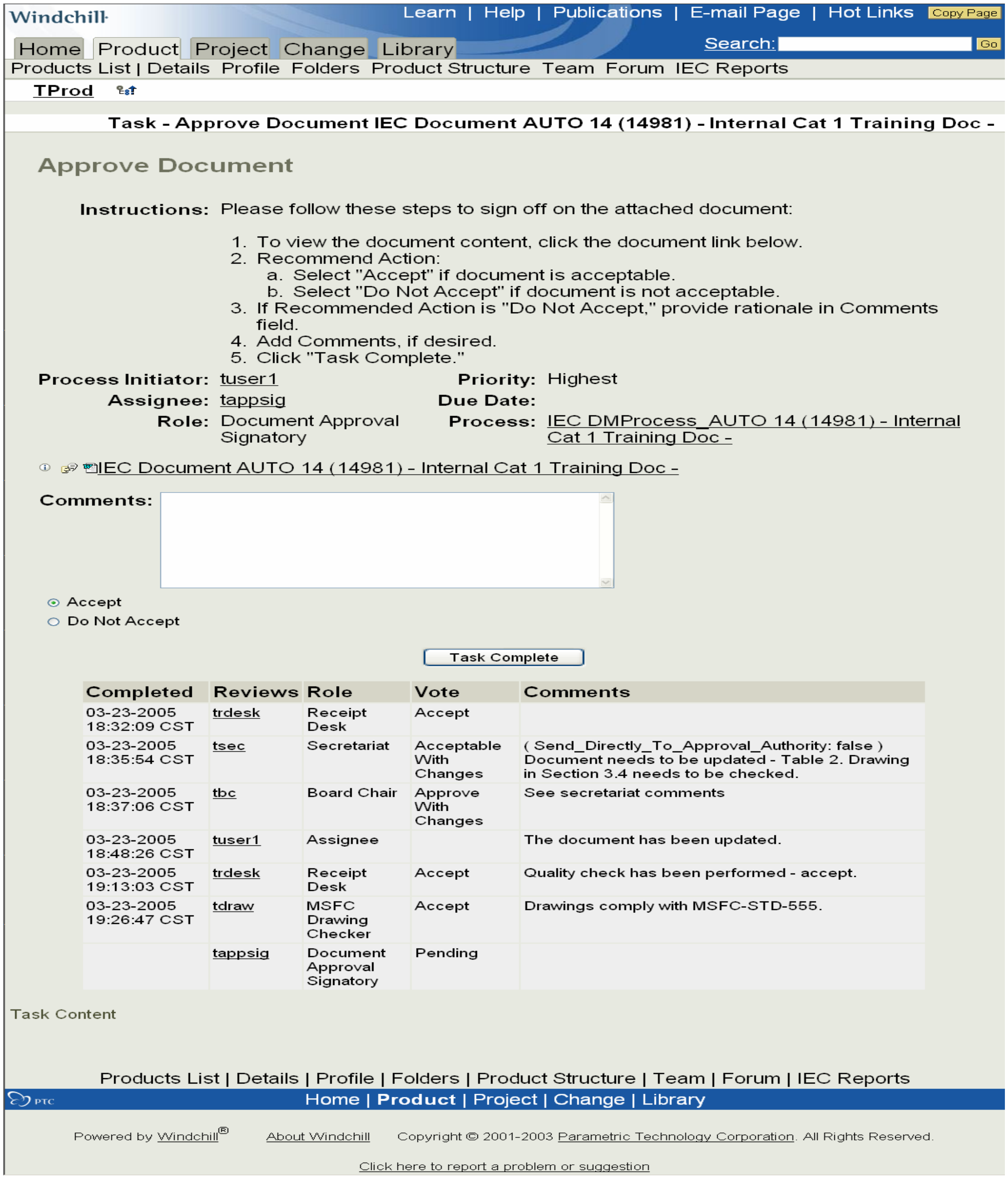
STEP 2: The **Drawing Checker** will click the "Task Complete" button to complete the workflow task.

The Drawing Checker completes the Finalization State. If accepted, the In-house Category 1 document now moves to the approval signatories in the Final Authorization State.

4.2.17 Approve Document - Final Authorization State

The In-house Category 1 document is now ready for the final authorization. The Document Approval Signatories receive a task via email notification to approve the document. The task will also appear in the Assignments table of the Approval Signatory under the Home tab.

STEP 1: The **Approval Signatories** will click on the task name and the “Approve Document” task page will appear. They will follow the instructions on the task page, and then select the “Accept” or “Do Not Accept” radio buttons. Comments are required if the document is unacceptable. If the Approval Signatories do not approve the document, the document will go back to the Receipt Desk for another Quality Check. If the Receipt Desk does not accept it, the originator will receive a task to re-work and re-submit the document.



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Task - Approve Document IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Approve Document

Instructions: Please follow these steps to sign off on the attached document:

1. To view the document content, click the document link below.
2. Recommend Action:
   a. Select "Accept" if document is acceptable.
   b. Select "Do Not Accept" if document is not acceptable.
3. If Recommended Action is "Do Not Accept," provide rationale in Comments field.
4. Add Comments, if desired.
5. Click "Task Complete."

Process Initiator: tuser1 **Priority:** Highest
Assignee: tappsig **Due Date:**
Role: Document Approval Signatory **Process:** IEC DMProcess_AUTO 14 (14981) - Internal Cat 1 Training Doc -

IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Comments:

Accept
Do Not Accept

Task Complete

Completed	Reviews	Role	Vote	Comments
03-23-2005 18:32:09 CST	trdesk	Receipt Desk	Accept	
03-23-2005 18:35:54 CST	tsec	Secretariat	Acceptable With Changes	(Send_Directly_To_Approval_Authority: false) Document needs to be updated - Table 2. Drawing in Section 3.4 needs to be checked.
03-23-2005 18:37:06 CST	tbc	Board Chair	Approve With Changes	See secretariat comments
03-23-2005 18:48:26 CST	tuser1	Assignee		The document has been updated.
03-23-2005 19:13:03 CST	trdesk	Receipt Desk	Accept	Quality check has been performed - accept.
03-23-2005 19:26:47 CST	tdraw	MSFC Drawing Checker	Accept	Drawings comply with MSFC-STD-555.
	tappsig	Document Approval Signatory	Pending	

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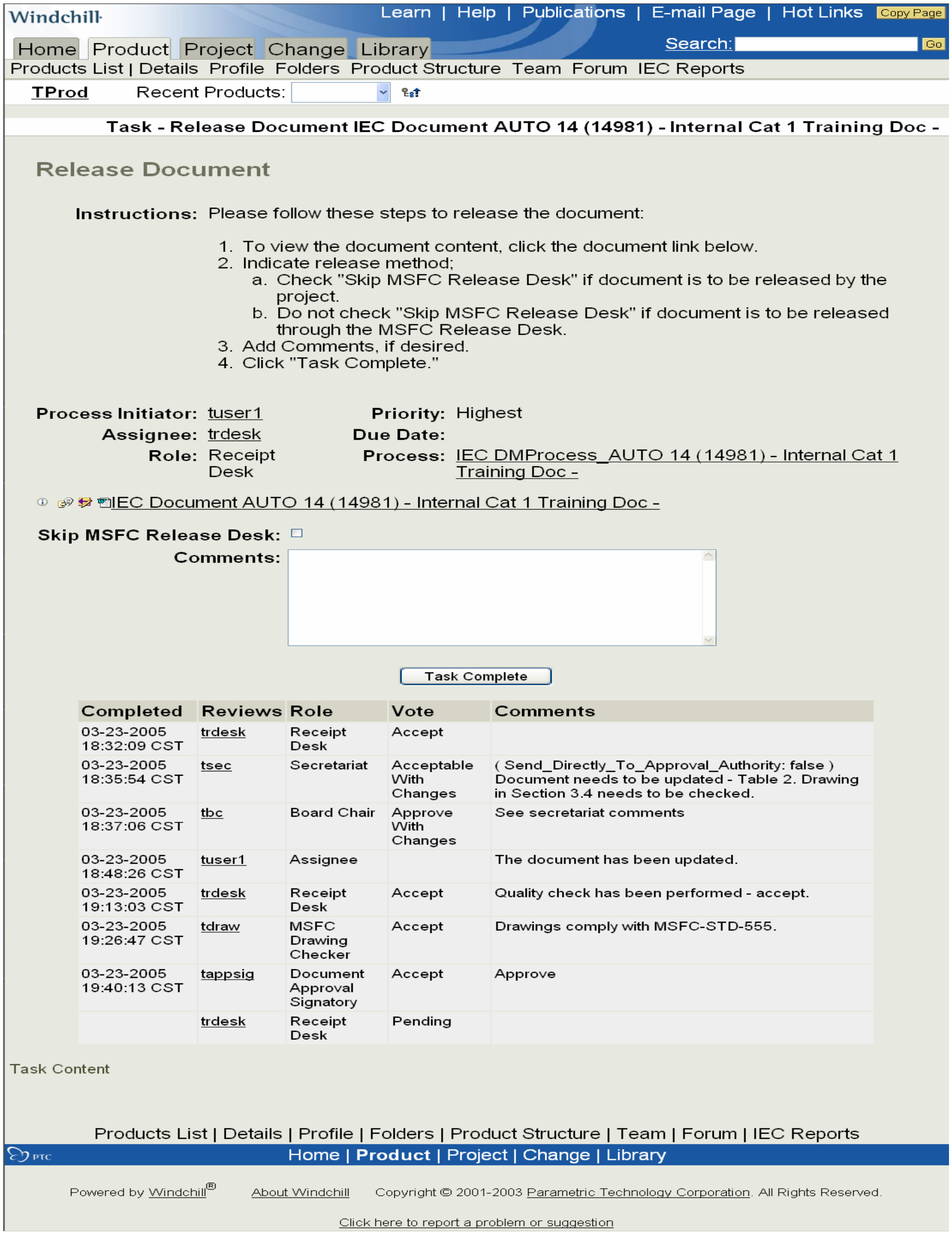
Approve Document Task Page - Final Authorization State

STEP 2: The **Approval Signatories** will click the "Task Complete" button to complete the workflow task.

4.2.18 Release Document

Once all the appropriate approval signatories have approved the In-house Category 1 Document, the Receipt Desk will receive a task via email notification to Release the document. The task will also appear in the Assignments table of the Receipt Desk under the Home tab.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Task - Release Document IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Release Document

Instructions: Please follow these steps to release the document:

1. To view the document content, click the document link below.
2. Indicate release method;
   a. Check "Skip MSFC Release Desk" if document is to be released by the project.
   b. Do not check "Skip MSFC Release Desk" if document is to be released through the MSFC Release Desk.
3. Add Comments, if desired.
4. Click "Task Complete."

Process Initiator: tuser1
Priority: Highest
Assignee: trdesk
Due Date:
Role: Receipt Desk
Process: IEC DMProcess_AUTO 14 (14981) - Internal Cat 1 Training Doc -

IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Skip MSFC Release Desk:
Comments:

Task Complete

Completed	Reviews	Role	Vote	Comments
03-23-2005 18:32:09 CST	trdesk	Receipt Desk	Accept	
03-23-2005 18:35:54 CST	tsec	Secretariat	Acceptable With Changes	(Send_Directly_To_Approval_Authority: false) Document needs to be updated - Table 2. Drawing in Section 3.4 needs to be checked.
03-23-2005 18:37:06 CST	tbc	Board Chair	Approve With Changes	See secretariat comments
03-23-2005 18:48:26 CST	tuser1	Assignee		The document has been updated.
03-23-2005 19:13:03 CST	trdesk	Receipt Desk	Accept	Quality check has been performed - accept.
03-23-2005 19:26:47 CST	tdraw	MSFC Drawing Checker	Accept	Drawings comply with MSFC-STD-555.
03-23-2005 19:40:13 CST	tappsig	Document Approval Signatory	Accept	Approve
	trdesk	Receipt Desk	Pending	

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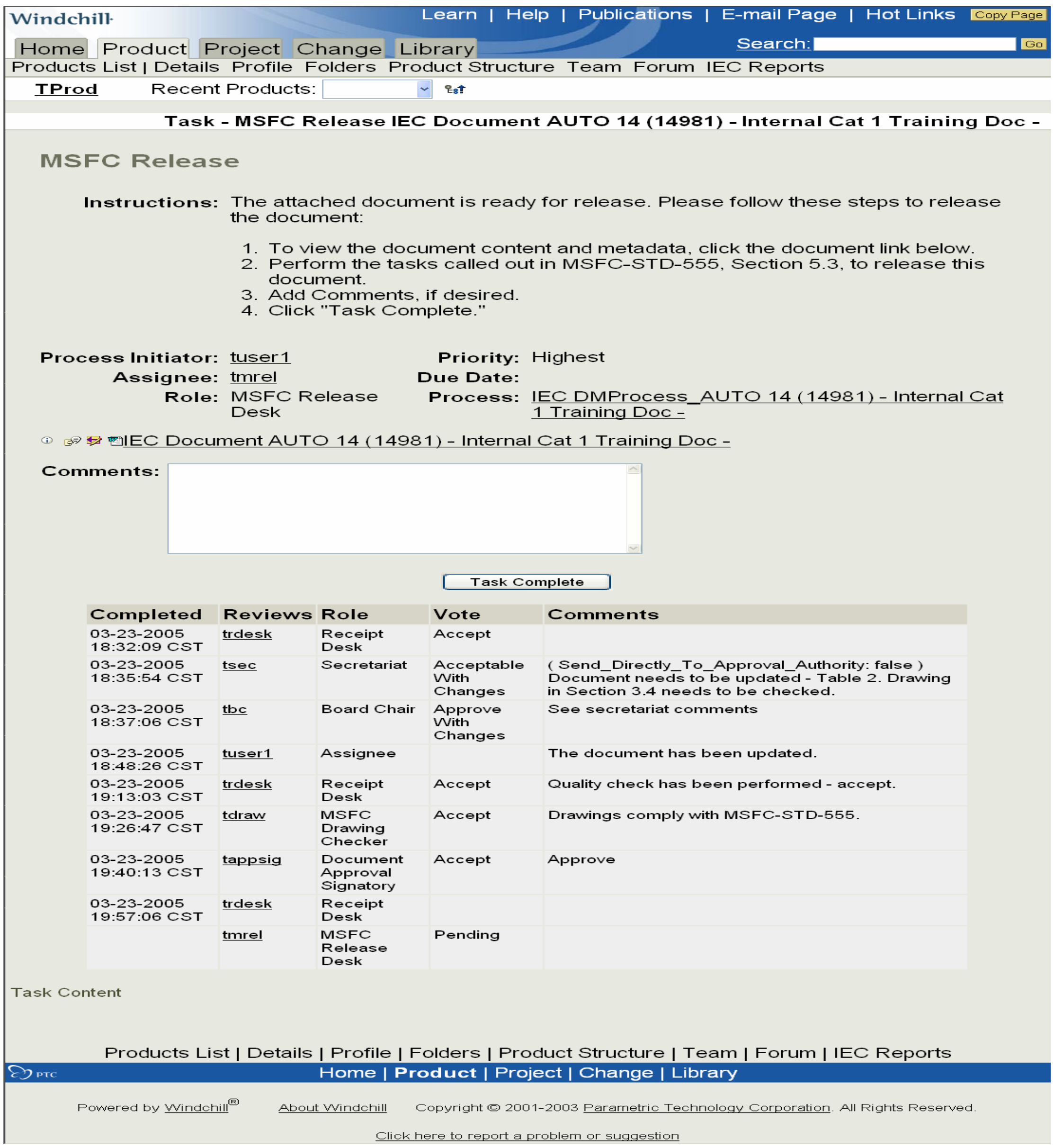
Release Document Task Page

STEP 1: The **Receipt Desk** will click on the task name and the "Release Document" task page will appear. They will follow the instructions on the task page, and then indicate whether or not the document will be released through the MSFC Release Desk.

STEP 2: The **Receipt Desk** will click the "Task Complete" button to complete the workflow task.

4.2.19 MSFC Release

If the In-house Category 1 document needs to be released through the MSFC Release Desk, the MSFC Release Desk will receive a task via email notification to Release the document. The task will also appear in the Assignments table of the MSFC Release Desk under the Home tab. If the document is not released through MSFC, the document's lifecycle state will be "Released" after the completion of the Receipt Desk's task. Release through the MSFC Release Desk ensures that documentation meets MSFC requirements and ensures recording of the as-designed configuration in the Integrated Configuration Management System (ICMS).



MSFC Release Task Page

STEP 1: The **MSFC Release Desk** will click on the task name and the "MSFC Release" task page will appear. They will follow the instructions on the task page.

STEP 2: The **MSFC Release Desk** will click the "Task Complete" button to complete the workflow task.

4.2.20 Route to MSFC Repository

After the document has been released through MSFC, the Receipt Desk will receive a task via email notification to route the In-house Category 1 Document to the MSFC Repository.

STEP 1: The **Receipt Desk** will click on the task name and the "Route to MSFC Repository" task page will appear. They will follow the instructions on the task page.

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Task - Route to MSFC Repository IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Route to MSFC Repository

Instructions: The attached document is ready for release. Please follow these steps to release the document:

1. To view the document content and metadata, click the document link below.
2. Prepare Documentation Input Record (DIR) - MSFC form 2896.
3. Send document package to MSFC Repository.
4. Add Workflow Comments, if desired.
5. Click "Task Complete."

Process Initiator: tuser1 Priority: Highest
Assignee: trdesk Due Date:
Role: Receipt Desk Process: IEC DMProcess_AUTO 14 (14981) - Internal Cat 1 Training Doc -

IEC Document AUTO 14 (14981) - Internal Cat 1 Training Doc -

Comments:

Task Complete

Completed	Reviews	Role	Vote	Comments
03-23-2005 18:32:09 CST	trdesk	Receipt Desk	Accept	
03-23-2005 18:35:54 CST	tsec	Secretariat	Acceptable With Changes	(Send_Directly_To_Approval_Authority: false) Document needs to be updated - Table 2. Drawing in Section 3.4 needs to be checked.
03-23-2005 18:37:06 CST	tbc	Board Chair	Approve With Changes	See secretariat comments
03-23-2005 18:48:26 CST	tuser1	Assignee		The document has been updated.
03-23-2005 19:13:03 CST	trdesk	Receipt Desk	Accept	Quality check has been performed - accept.
03-23-2005 19:26:47 CST	tdraw	MSFC Drawing Checker	Accept	Drawings comply with MSFC-STD-555.
03-23-2005 19:40:13 CST	tappsig	Document Approval Signatory	Accept	Approve
03-23-2005 19:57:06 CST	trdesk	Receipt Desk		
03-23-2005 20:01:21 CST	tmrel	MSFC Release Desk		Released according to MSFC-STD-555.
	trdesk	Receipt Desk	Pending	

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Route to MSFC Repository Task Page

STEP 2: The **Receipt Desk** will click the "Task Complete" button to complete the workflow task.

The In-house Category 1 document is now in the state of "Released" and the workflow process is complete.

The following flowcharts depict the Document Management Workflow processes for each of the different document types. It will be helpful to refer to these workflow diagrams to follow the review process.

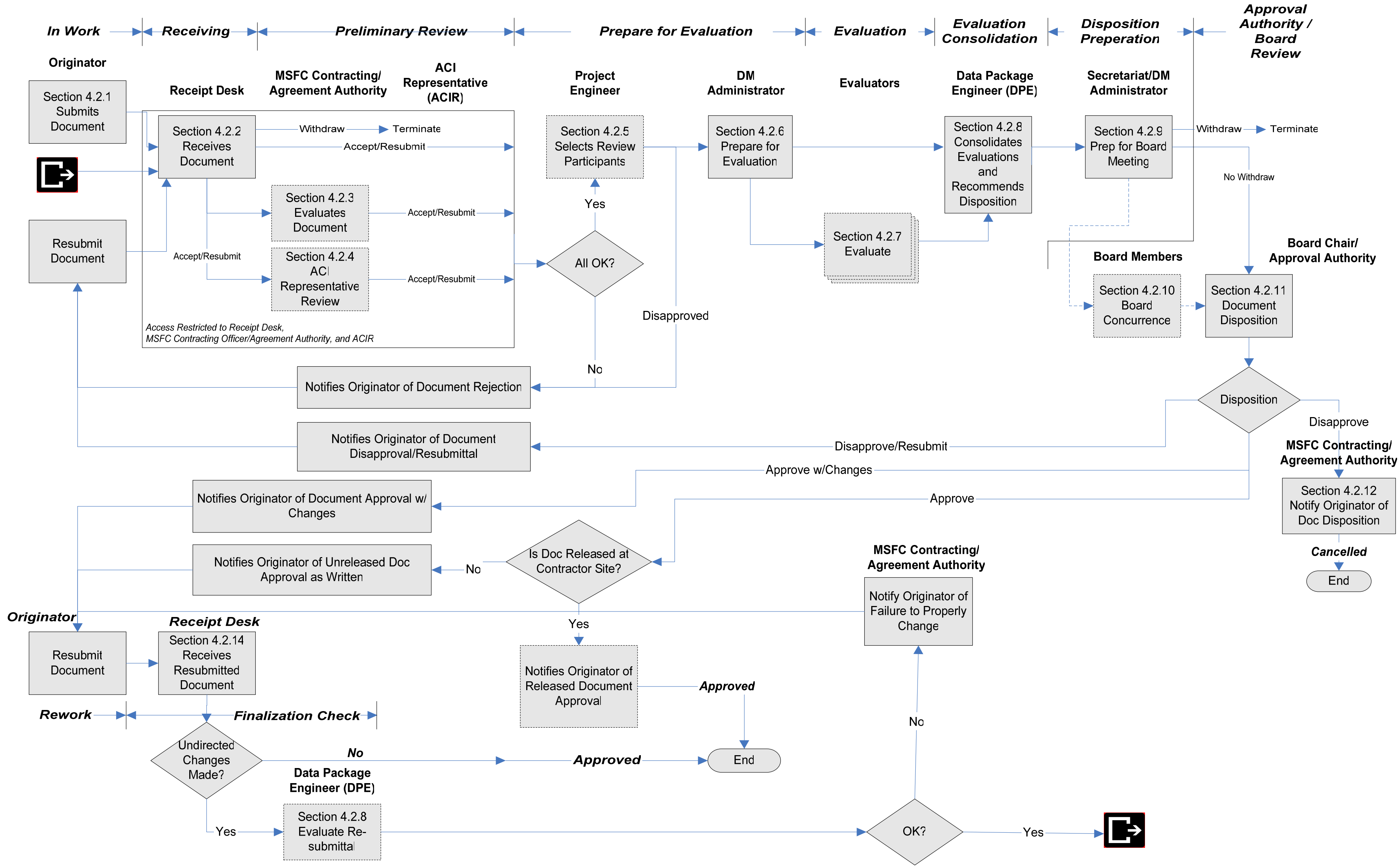


Figure 4-1 Document Process Flow for Contractor-Produced Type 1 & 2 and External Agency-Produced Category 1 Documents

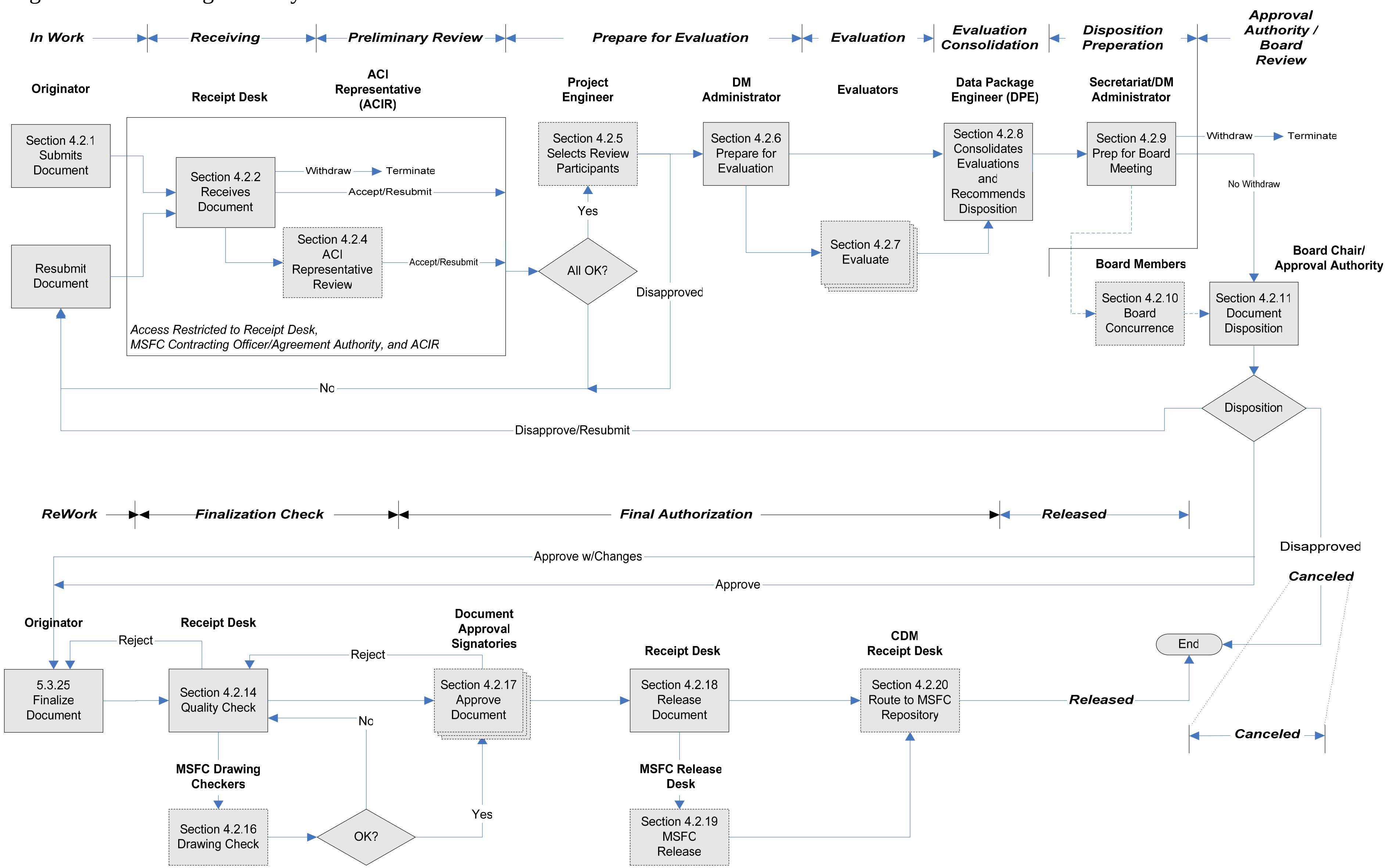


Figure 4-2 Document Management Process Flow for In-House Produced Category 1 Documents

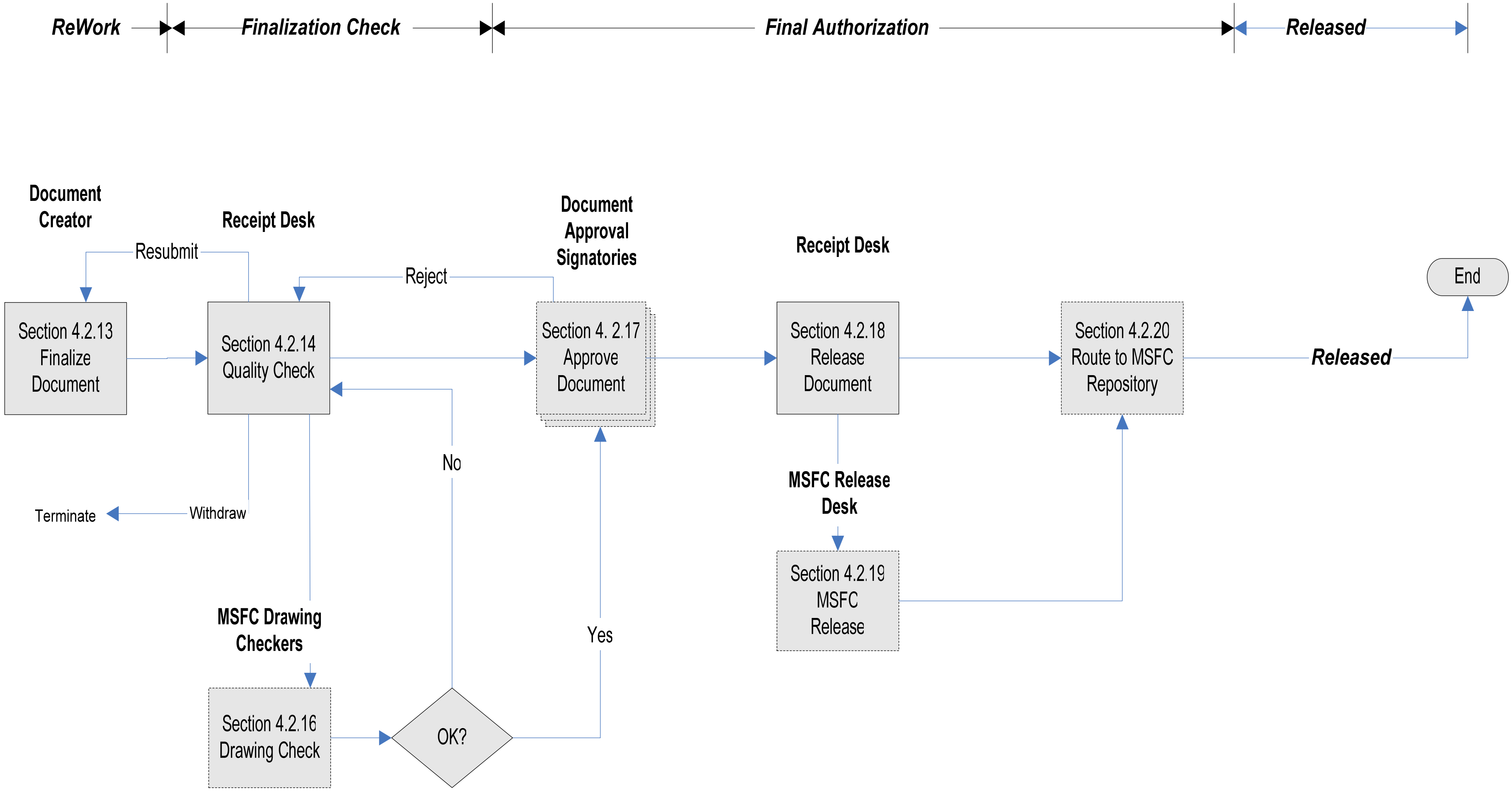


Figure 4-3 Document Finalization and Release Process Flow for MSFC-Produced Category 1 Document Directive Task – Document is approved or approved with change through the CM Process

*** NOTE: If an individual is assigned as the Contracting Officer/Agreement Authority then this flow will include the Contracting/Agreement Authority Review task during the Preliminary Review state

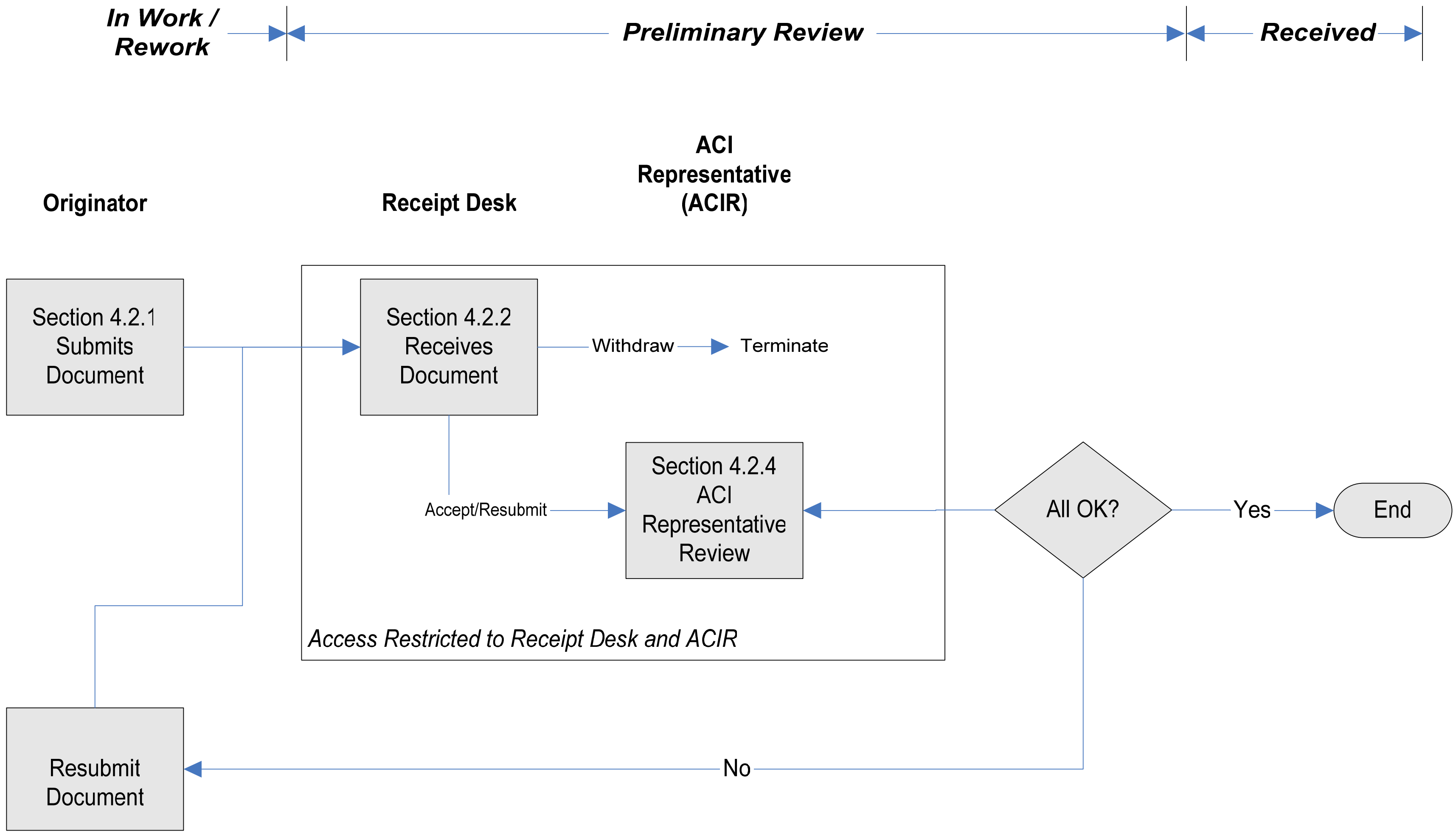


Figure 4-4 Document Management Process Flow for In-House Produced Category 3, Contractor-Produced Type 4 & 5, and External Agency-Produced Category 3 Documents

*** NOTE: If an individual is assigned as the Contracting Officer/Agreement Authority then this flow will include the Contracting/Agreement Authority Review task during the Preliminary Review state.

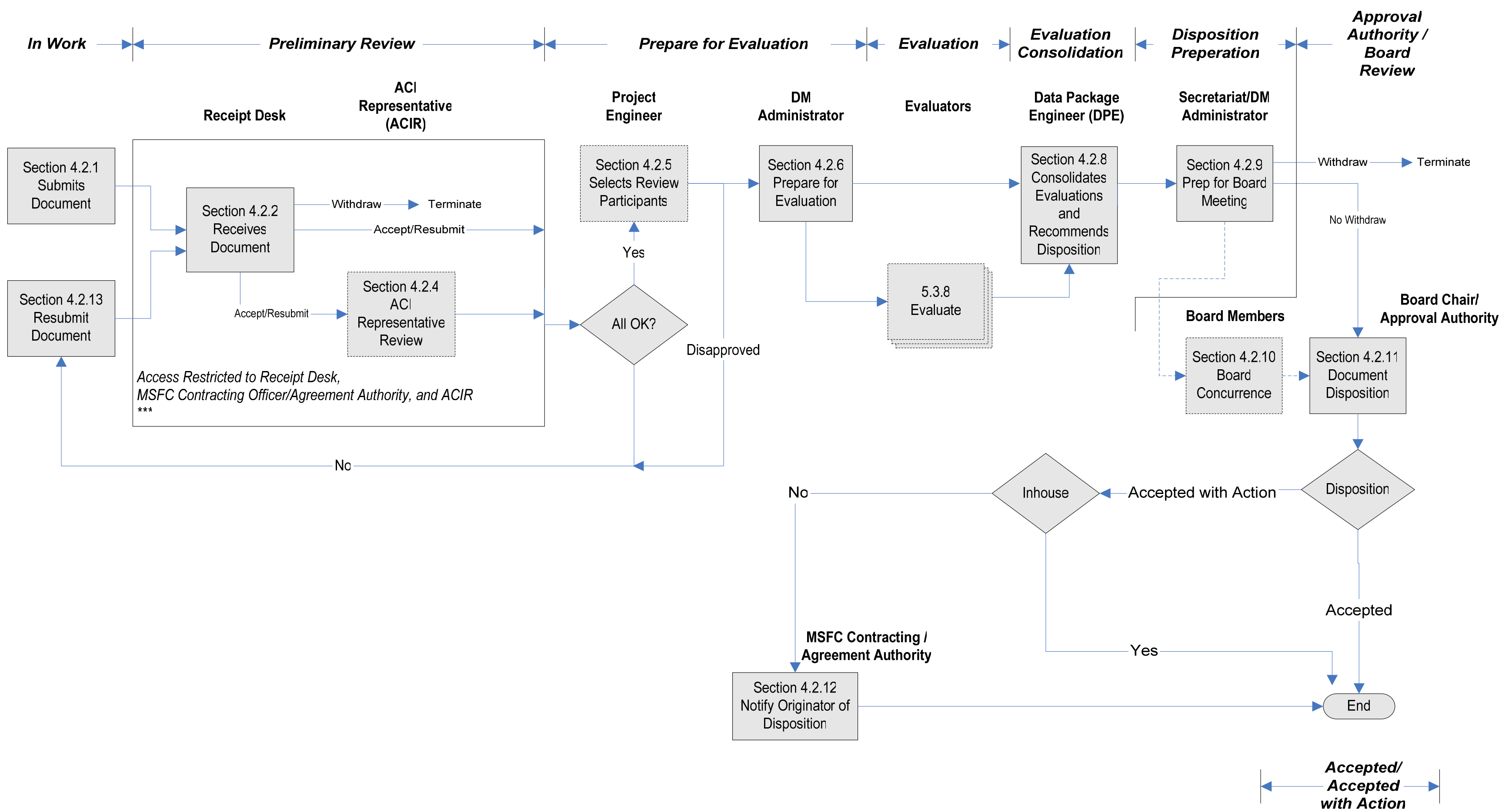


Figure 4-5 Document Management Process Flow for Contractor-Produced Type 3, External Agency-Produced Category 2, and In-House Produced Category 2 Documents

*** NOTE: If an individual is assigned as the Contracting Officer/Agreement Authority then this flow will include the Contracting/Agreement Authority Review task during the Preliminary Review state.

Module 5. Change Management (CM)

5.1 Objectives

Upon completion of this module, you should be able to:

- Access the CM Process in IEC DDMS and use the tool to benefit your Project
- Locate and reference the MSFC Change Management Process workflow
- Identify the user roles and responsibilities as they pertain to the CM process
- Create, submit, and update a Change Request and a Change Directive via the Product tab and Change tab
- Evaluate a change using DDMS
- Describe the relationship of CM Object types

5.2 Change Management Workflow Process

The MSFC Change Management Process consists of the activities summarized below:

CR LIFECYCLE STATE	ACTIVITY	ROLE
In Work	Create, Update, and Submit CR	Project Member (Ref: Section 5.2.1)
Receiving	Receive Change Request	Receipt Desk (Ref: Section 5.2.2)
Preliminary CR Review	Screening Group Lead CR Review	Screening Group Lead (Ref: Section 5.2.3)
	Screening Group Member CR Review	Screening Group Member (Ref: Section 5.2.3)
	ACI Representative CR Review	ACI Representative (Ref: Section 5.2.4)
Prepare for CR Evaluation	Select CR Review Participants	Project Engineer (Ref: Section 5.2.5)
	Prepare for CR Evaluation	CM Administrator (Ref: Section 5.2.6)
Evaluation	Evaluate	Evaluators (Ref: Section 5.2.7)
	Close and Consolidate Evaluations	Change Package Engineer (CPE) (Ref: Section 5.2.8)
Disposition Preparation	Prepare Disposition	Secretariat (Or CM Admin) (Ref: Section 5.2.9)
Board Review	Board Member CD Concurrence	Board Members (Ref: Section 5.2.10)
	Board Chair signs CD	Board Chair (Ref: Section 5.2.11)

Dispositioned	Notify Contractor/Originator that CR is Dispositioned	Contracting Authority (Contractor-Produced CR) Change Originator (In-house CR) (Ref: Section 5.2.12)
* Implementation	Implement CD Task	Project Member – Actionee (Ref: Section 5.2.13)
*Verification	Verify CD task	Project Member – Concurree (Ref: Section 5.2.14)
Closed		

** These steps are not a lifecycle state of a CR workflow process but are listed to show process.

The CR may be given one of the following dispositions after Board Review:
- Approved as Written
- Approved w/Changes
- Disapproved/Re-Submit
- Disapproved

Each activity will be described in detail in the following sections.

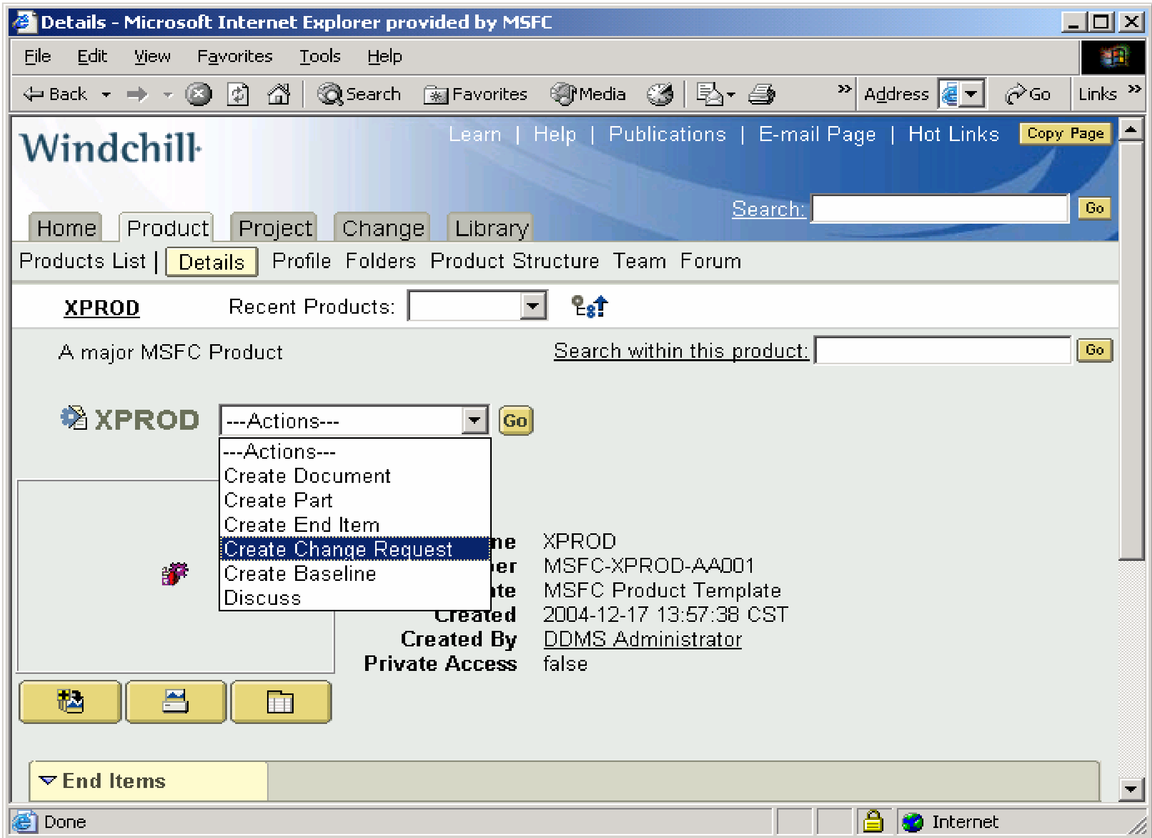
5.2.1 Creating a Change Request

Typically, any IEC DDMS user can create a Change Request (CR). The CR is in a state of “In Work” until the CR Creator determines to submit the CR for formal CM review.

While a Document can be created in both the Product and Project context, a CR can only be created in the Product context.

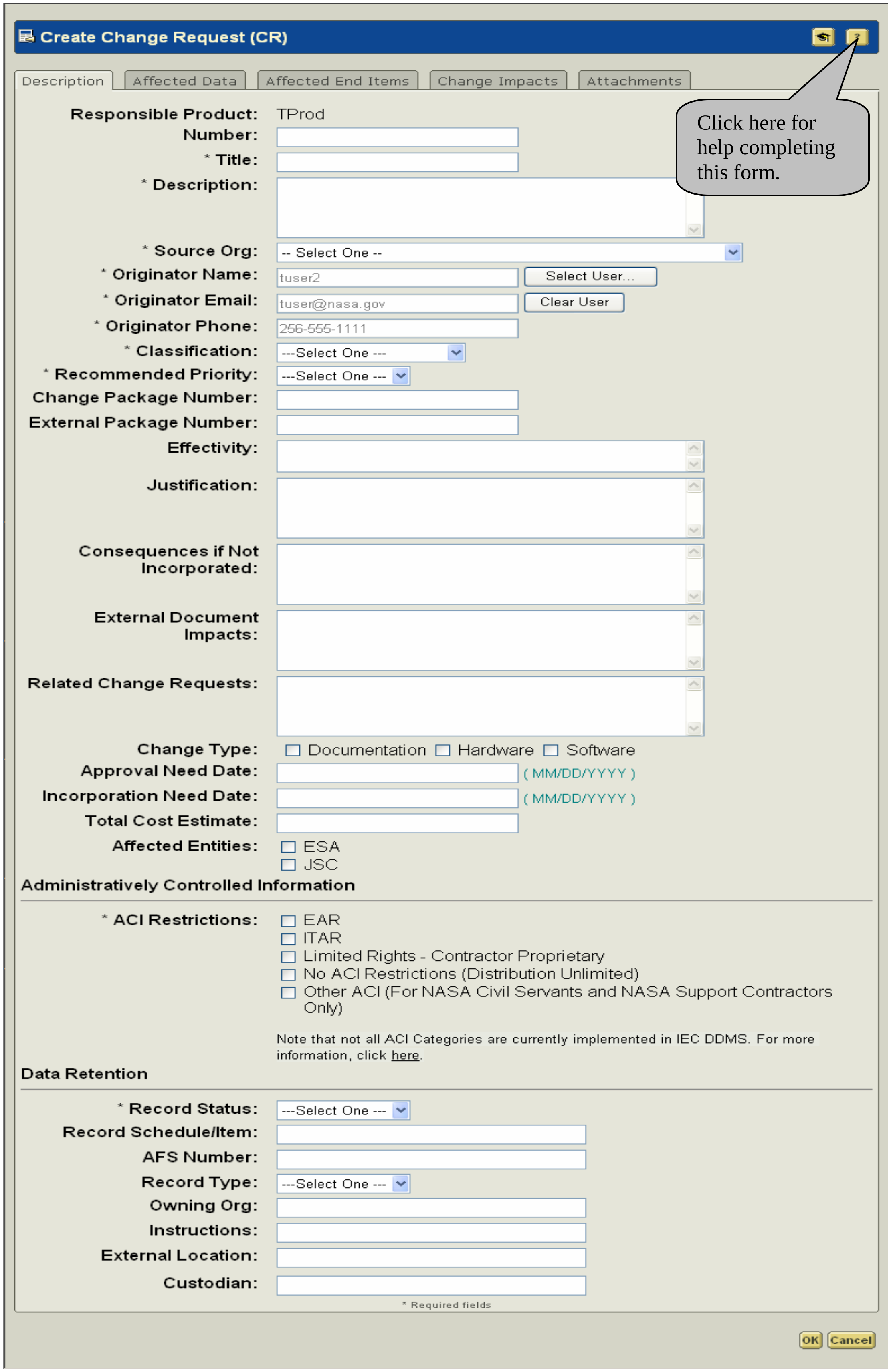
A Change Request Creator should use the following steps to successfully create a CR:

STEP 1: Starting from the **Product** tab, **Details** page, the **Change Request Creator** initiates the CR by selecting the “Create Change Request” option from the drop down menu and click “GO” as shown in the following screen shot:



STEP 1 – Create Change Request Drop Down Action List

Step 2: When the “Create Change Request” action is selected, a pop-up screen will appear. The **Change Request Creator** will fill in all CR attributes. In the following pages, the MSFC CR attributes are covered in more detail.



Create Change Request (CR)

Description | Affected Data | Affected End Items | Change Impacts | Attachments

Click here for help completing this form.

Responsible Product: TProd
Number:
* Title:
* Description:
* Source Org: -- Select One --
* Originator Name: tuser2 [Select User...]
* Originator Email: tuser@nasa.gov [Clear User]
* Originator Phone: 256-555-1111
* Classification: ---Select One ---
* Recommended Priority: ---Select One ---
Change Package Number:
External Package Number:
Effectivity:
Justification:
Consequences if Not Incorporated:
External Document Impacts:
Related Change Requests:
Change Type: ☐ Documentation ☐ Hardware ☐ Software
Approval Need Date: (MM/DD/YYYY)
Incorporation Need Date: (MM/DD/YYYY)
Total Cost Estimate:
Affected Entities: ☐ ESA ☐ JSC

Administratively Controlled Information

* ACI Restrictions:
☐ EAR
☐ ITAR
☐ Limited Rights - Contractor Proprietary
☐ No ACI Restrictions (Distribution Unlimited)
☐ Other ACI (For NASA Civil Servants and NASA Support Contractors Only)

Note that not all ACI Categories are currently implemented in IEC DDMS. For more information, click here.

Data Retention

* Record Status: ---Select One ---
Record Schedule/Item:
AFS Number:
Record Type: ---Select One ---
Owning Org:
Instructions:
External Location:
Custodian:

* Required fields

[OK] [Cancel]

Create Change Request (Description Tab)

5.2.1.1 Required Change Request Attributes

The following is a brief description of all the CR attributes. This help information is conveniently located at the top of the Create Change Request page and can be accessed by clicking on the ? in the upper right corner.

Responsible Product - The product has previously been identified in the Project Profile during the DDMS set up procedures. This field is automatically populated.

Number – This unique CR number is generated and maintained within the project that is originating the CR.

Title (Required) - The user will enter the specific title of the CR.

Description (Required) – This is a brief description that summarizes the proposed change.

Source Org (Required) - Via the Source Org dropdown list, the CR Creator will be able to associate the CR with an “owning” organization (e.g. MSFC, Contractor, or other). This organization information will have previously been established by the IEC DDMS Administrator in the Project Profile. When the user selects the Source Org, the Source Organization Code and CAGE (or Entity) code associated with it will also be automatically filled in since that information is unique to a specific Source.

Originator – (Name, email, and phone) - (Required) – This information is automatically populated with the creator’s name, email and phone number. An Originator other than the CR Creator can be selected by using the indicated fields. If the user is a DDMS User, the creator will click the “Select User” button to search and select the appropriate user. When the user is selected, the Originator’s Name, Email, and Phone fields will also be populated.

Classification (Required) - Configuration control changes shall be classified as either Class I or Class II depending upon the impact of the proposed change to the established configuration baseline.

- **Class I CR or Deviation/Waiver** - A change or deviation/waiver shall be classified as Class I when any of the criteria listed below is affected.
    a. System Specification or other NASA-baseline documentation
    b. Contract price or fee, contract guarantees, contract delivery, or contract-controlled milestones
    c. Configuration of engineering components
    d. Configuration to the extent that modification action is required for end-items
    e. Approved test and checkout requirements

- **Class II CR or Deviation/Waiver** - A proposed change or deviation/waiver shall be designated as Class II when it does not fall within the Class I definition in the above paragraph. Therefore, there is no requirement for a Class II CR or Deviation/Waiver to be submitted to a Board for disposition. However, a copy of the Class II CR or Deviation/Waiver should be provided to the Project's Chief Engineer for concurrence classification.

Recommended Priority (Required) – Changes are processed under the following three categories:

- Routine – 28 Calendar Days
- Urgent – 14 Calendar Days
- Emergency – 48 hours

Note: Emergency Priority is used to correct a safety condition, which could result in fatal or serious injury to personnel or in extensive damage, or destruction of equipment. The Emergency category should not be used simply because a project is behind schedule. Urgent should be used under that circumstance.

Change Package Number (Optional) – This is the unique number assigned to the consolidated record of all pertinent information associated with requesting, processing, and implementing a baseline, change or deviation/waiver. The typical change package includes the Change Request or deviation/waiver, supporting documentation, Change Evaluations, Change Directives with authorized implementation actions, and action closure data. The Change Package Number can be compared to the Program Control Number (PCN) historically used at MSFC.

External Package Number (Optional) – Upon occasion, there may be some external data (e.g. contractor-produced) that would be migrated into a change package. If that data has its own numbering system, that number would be entered here.

Effectivity (Optional) - A designation defining the Configuration Item (CI) range (e.g., serial numbers, lot numbers, model, dates) or an event that the usage of a specific configuration applies, a change to a specific CI is to be or has been effected, or to which a variance applies.

Justification (Optional) - Record the sufficient reason or cause for the change.

Consequences if Not Incorporated (Optional) – What will happen if this change is not accepted?

External Document Impacts (Optional) – List any external documents that will be affected if the change is accepted.

Related Change Requests (Optional) – List any existing Change Requests that may be associated with this new CR.

Change Type (Optional) – The user should indicate if the change affects one or more of the following:

- Hardware
- Software
- Documentation

Approval Need Date (Optional) - The date that the Change Request needs to be approved by the approval authority in order for the change to be satisfactorily incorporated.

Incorporation Need Date (Optional) – The date that the Change Requests need to be implemented.

Total Cost Estimate (Optional) – An estimate of what the cost of the change will be if the CR is approved.

Administratively Controlled Information (ACI)

Not all ACI categories are currently implemented in DDMS.

ACI Restrictions (Required) - Official information and material, of a sensitive but unclassified nature, which does not contain national security information (and therefore cannot be classified), nonetheless, should still be protected against inappropriate disclosure. Information designated ACI shall be marked at the top and bottom of each page. ACI designations include the following:

☐ **Export Administration Regulations (EAR) Notice –** (Per NPR 1620.x and MPR 1600.1) If NASA Program/Project documentation is controlled by EAR, it contains information that falls under the purview of the Export Administration Regulations (15 CFR 730-774) and **is export controlled. It shall NOT be transferred to foreign nationals** in the US or abroad without specific approval of a knowledgeable NASA export control official, and/or unless an export license/license exemption is obtained/available from the Bureau of Export Administration (BXA), U. S. Department of Commerce. All copies shall bear the following notice:

Export Administration Regulations (EAR) Notice **This document contains information within the purview of the Export Administration Regulations (EAR), 15 CFR 730-774, and is export controlled. It may not be transferred to foreign nationals in the U.S. or abroad without specific approval of a knowledgeable NASA export control official, and/or unless an export license/license exception is obtained/available from the Bureau of Export Administration (BXA), United States Department of Commerce. Violations of these regulations are punishable by fine, imprisonment, or both.**

☐ **International Traffic in Arms Regulation (ITAR) -** (Per NPR 1620.x and MPR 1600.1) If NASA Program/Project documentation is restricted by ITAR, it contains information that falls under the purview of the U.S. Munitions List (USML) and **is export controlled. It shall NOT be transferred to foreign nationals** in the US or abroad without specific approval of a knowledgeable NASA export control official, and/or unless an export license/license exemption is obtained/available from the US Department of State. All copies shall bear the following notice:

International Traffic in Arms Regulations (ITAR) Notice

This document contains information which falls under the purview of the U.S. Munitions List (USML), as defined in the International Traffic in Arms Regulations (ITAR), 22 CFR 120-130, and is export controlled. It shall not be transferred to foreign nationals in the U.S. or abroad, without specific approval of a knowledgeable NASA export control official, and/or unless an export license/license exemption is obtained/available from the United States Department of State. Violations of these regulations are punishable by fine, imprisonment, or both.

☐ **Limited Rights - Contractor Proprietary –** (Per NPR 1620.x and MPR 1600.1) Generally, NASA contractors, grantees, or partners are required to deliver data (including computer software) to NASA without any restriction on further dissemination and use of the data. However, to the extent NASA contractors, grantees, or partners need to deliver proprietary data to NASA, then such data shall only be (1) delivered in strict accordance with the contract, grant, or written agreement (i.e., the contract, grant, or written agreement has to expressly allow the delivery of proprietary data) and (2) marked in strict accordance with the contract, grant, or written agreement. Under a NASA contract, acceptable proprietary markings include (1) the "Limited Rights Notice" as follows:

Limited Rights Notice

(a) These data are submitted with limited rights under Government Contract No. _____ (and subcontract ______, if appropriate). These data may be reproduced and used by the Government with the express limitation that they will not, without written permission of the Contractor, be used for purposes of manufacture nor disclosed outside the Government; except that the Government may disclose these data outside the Government for the following purposes, if any; provided that the Government makes such disclosure subject to prohibition against further use and disclosure: (b) This Notice shall be marked on any reproduction of these data, in whole or in part.

☐ **No ACI Restrictions –** Documentation with no ACI restrictions are assumed to have unlimited distribution and all copies shall bear the following notice:

"Approved for Public Release; Distribution Unlimited"

☐ **Other ACI**

Per NPR 1620.x and MPR 1600.1, information limited to "NASA civil servants and NASA Support Contractors only" may be restricted due to:

- SBIR
- Restricted Rights software
- Space Act (Sec 303b)
- Patent information
- Copyright
- NASA Trade Secrets
- NASA Business Confidential
- Other NASA sensitive (pre-decisional information)
- Inter- or Intra-Agency Memoranda or Letters

Data Retention

Most of this Data Retention section of the Create Change Request screen will likely be completed by the Receipt Desk or other CDM Personnel familiar with Records Management during the Receiving state.

According to NPR 1441.1D, all Federal employees are required by law and Agency policy to maintain and preserve records. Good records management requires that as soon as records are no longer needed, archival needs must be recognized and the NASA installation records management program must be followed to ensure that records are appraised, transferred and disposed of efficiently and economically.

Record Status (Required) – From the drop down list, the CR Creator will choose an initial "Record Status" for each CR created in DDMS as follows:

- Active – This status is used for records that are referred to on a frequent basis, i.e. daily or weekly. Records are maintained in office files for immediate access, use, and reference. Also considered current records, which are necessary for conducting the business of an office.
- Destroyed – This status is used for records that contain information that needs to be effectively obliterated.
- Not a Record – A CR is considered a record if it has been created or received by an agency of the U.S. Government under Federal law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its legitimate successor as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the informational value of the data contained therein. (Non-Record examples: Library materials, reference docs, extra copies of docs, etc)
- Transferred – A transferred document is one that is to be moved into the legal custody of NARA or other authorized depository.

Record Schedule/Item - A Change Request's Record Retention Schedule is divided into the following 10 subject categories:

Schedule	Subject Category
1	*Organization and Administrative
2	Legal and Technical
3	Human Resources - Personnel
4	Property and Supply
5	Industrial Relations and Procurement
6	Transportation
7	Program Formulation
8	Program Management
9	Financial Management and Inspector General
10	*Common Records

* Will be used by all offices
All others are dependent on office function/operation

Item is the reference number given to the series of records descriptions in a particular schedule. It is used for transferring records to a central records center.

AFS Number (Optional) – The AFS number (4-Digit Number) for a CR is the Agency Filing Scheme for a group of records (series) that relate to a particular subject or function, result from the same activity, document a specific kind of transaction, take a particular form, or have some other relationship arising out of their creation, receipt, or use.

Record Type (Optional) – The Document's Record Type can be one of the following types:

- Permanent - In U.S. Government usage, records appraised by NARA as having enduring value because they document the organization and functions of the agency that created or received them; and/or, because they contain significant information on persons, things, problems, programs, projects, and conditions with which the agency dealt. These records are valuable or unique in that they document the history of the agency and generally record primary missions, functions, responsibilities and significant experiences or accomplishments of the agency.
- Temporary – Records approved by NARA or by an authorized agency records schedule for disposal, either immediately or after a specified period of time. They are also called disposable records or nonpermanent records.

Owning Org (Optional) - The owning org is the organization that will assume "ownership" of the document and be responsible for its proper disposal. This is usually the Org Code that is named on the Document's cover sheet on In-house documents, the Contractor's name on Contractor-Produced documents, and the External Agency's name for those documents created by an external agency. Usually, but not always, this is the Office of Primary Responsibility (OPR).

Instructions (Optional) - This field allows the CR Creator the opportunity to record any instructions concerning the retention of the CR (200 character limit).

External Location (Optional) – In this field, the CR Creator will record where the CR itself will be located, for example, Building/Room, or XYZ Database.

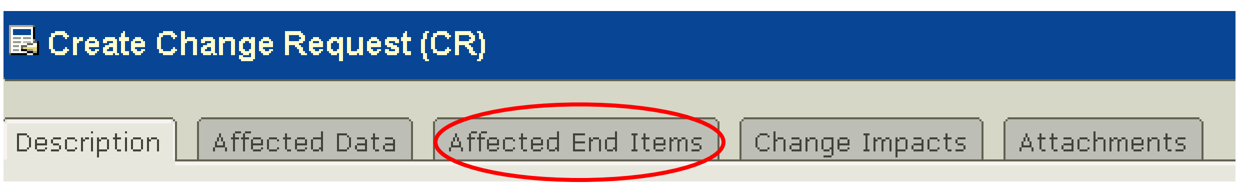
Custodian (Optional) - The Record's Custodian is the individual who is responsible for collecting, indexing, accessing, filing, storing, maintaining, and dispositioning a record or collection of records.

IMPORTANT: Do not select the OK button until all information under all tabs has been entered for the CR.

STEP 3: Once the Change Request description has been completed, the **Change Request Creator** can select the "Affected Data" tab to add additional items to the CR.

The "Add Affected Data" hyperlink provides a pop-up window with a search interface to add additional data items that are affected if the CR is accepted.

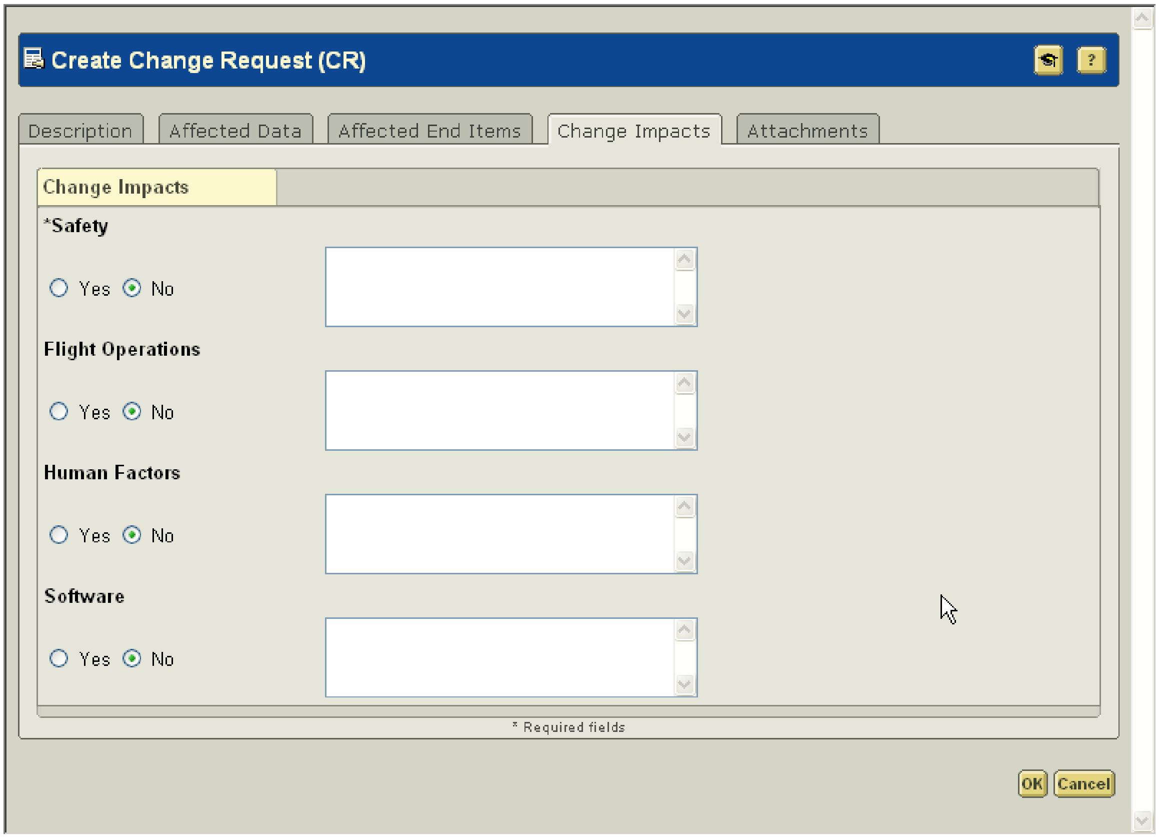
STEP 4: The **Change Request Creator** can then select the "Affected End Item" tab to add additional Affected End Items to the CR.



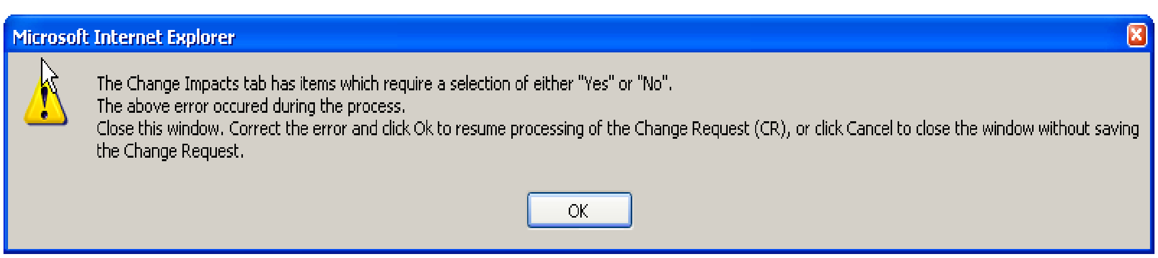
The "Add Affected End Items" hyperlink provides a pop-up window with a search interface to add additional items to the CR. The Change Request Creator can choose the desired additional items to be added to the CR by clicking the checkbox beside each item and click the "Add Affected End Items" button.

STEP 5: The **Change Request Creator** must select the **"**Change Impacts" tab to indicate the impacts the change will have on certain areas of the project such as safety, flight operations, cost, schedule, etc. Each Project's list of impact areas will be different depending on the Project's selections provided in the Project Profile.

The following is an example of what the user may see when selecting the Change Impact tab.



Note: Change Impacts must be identified in the Project Profile. If Change Impacts have been identified in project setup, the system will not allow the CR creation process to continue until change impacts have been selected for the change. The user will see the following error message if identified Change Impacts have not been selected:



STEP 6: The **Change Request Creator** can select the "Attachments" tab to upload files that support the CR such as parts lists, word documents with backup information concerning the CR, and other files.

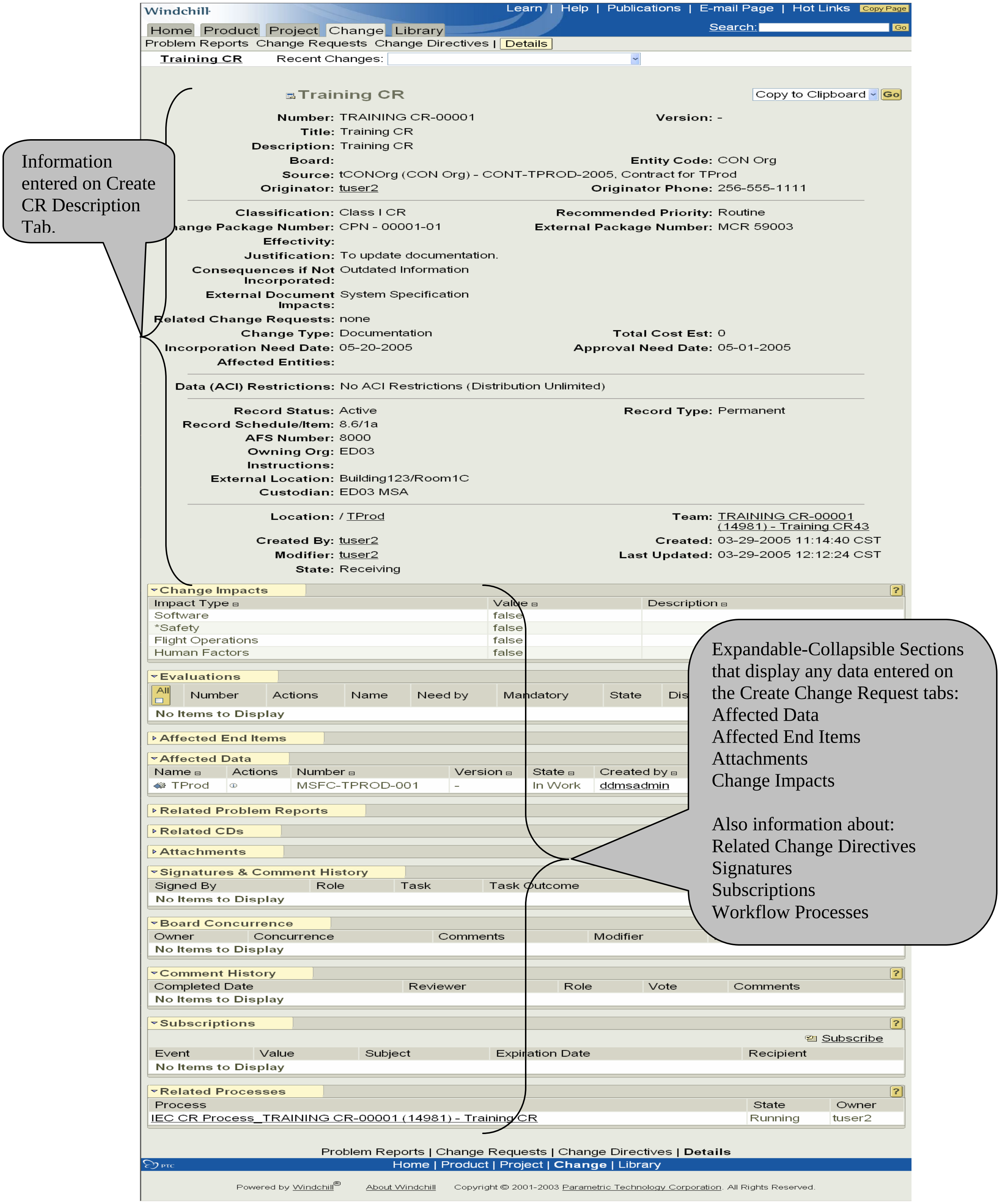
The **Change Request Creator** clicks the "Browse" button to open a File Chooser to select individual files such as a Word Document. Once the file is selected, click the "Add" button to upload the file to the server and complete the attachment to the CR.

Once all information about the CR has been entered, then the CR Originator can select the "OK" button. The CR is now in the lifecycle state of "In Work".

5.2.1.2 Viewing, Updating, Deleting, and Submitting a Change Request – In Work

- **Viewing a Change Request**

From the **Change** tab, **Change Requests** page, the user may view the Change Request and its details (or metadata) by clicking on the Details icon which shows all of the descriptive information that was entered when the CR was created. This page also displays other data relevant to the CR. **Note: All change requests can be viewed after the Change Requests Table has been expanded by setting Current View = All Open.** The **Change** tab is not product specific. If the user is a team member of multiple products, all CRs that the user has access to are shown. The user would sort through the **Context** column to locate the particular CR to be reviewed.

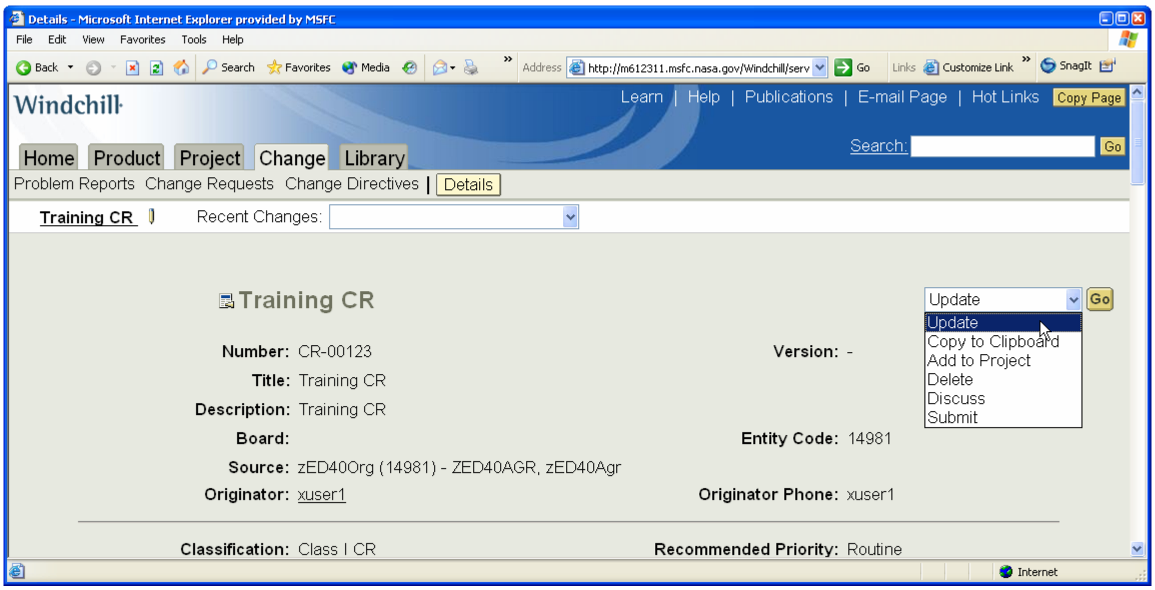


Change Request Details Page

- **Updating and Deleting Change Requests Prior to Submission**

From the Change Request Details page, the Actions pull-down menu provides the ability to Update and Delete the Change Request.

Note: Actions will only be available depending on the current user and the lifecycle state of the Change Request. As such, the Update and Delete actions will only be available to the Creator of a Change Request <u>prior</u> to submission. Once the change is submitted, these actions will no longer be available to preserve the integrity of the Change process. However, once a Change Request has been created, the CR number and title cannot be changed.

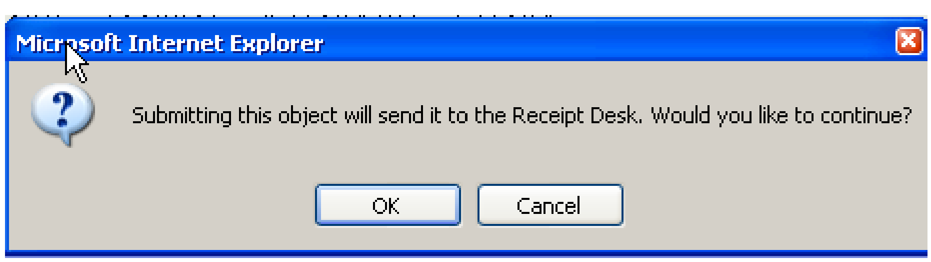


Update - Change Request Details Drop Down Action List

When updating the Change Request, the Update Change Request page will display all of the fields that were available on the previous Create Change Request page.

- **Submitting Change Requests**

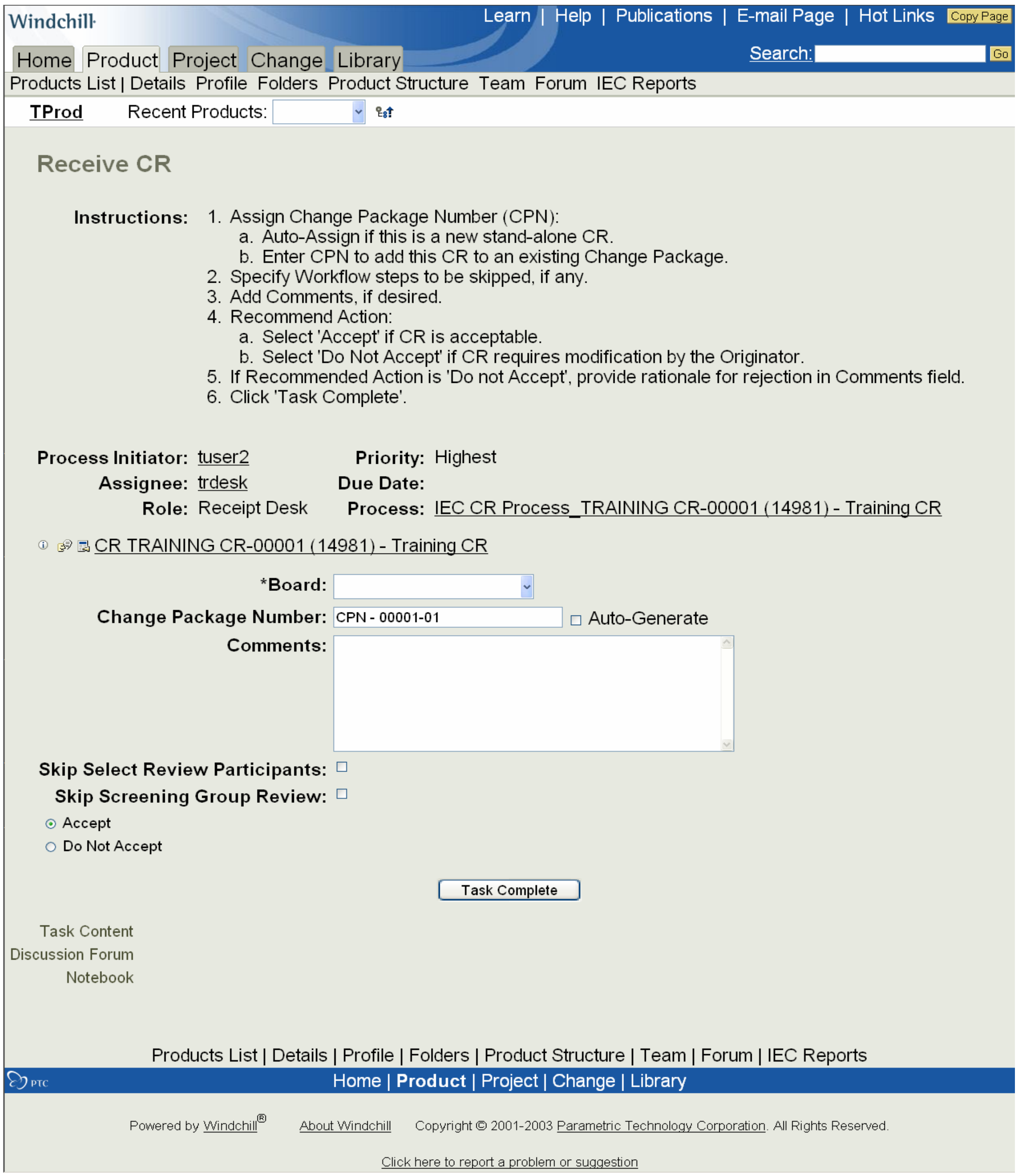
After the Change Request is created, the **Change Request Creator** can submit the CR by going to the drop down menu (shown above) on the Change Request Details page and clicking **Submit** and then **Go**. The user will see the following popup window to verify that the CR Originator would like to start a formal CM review process for the CR:



5.2.2 Receive Change Request - Receiving State

When the CR enters the Receiving state, the Receipt Desk receives an e-mail notification to review the CR, and a new task is listed in the Receipt Desk's Assignments table under the Home tab.

STEP 1: The **Receipt Desk** Representative clicks on the Task hyperlink in the email notification OR selects the "Receive CR" task from the **Home** Tab, **Overview** page, **Assignments** Table.



Receive CR Task Page

STEP 2: The **Receipt Desk** Representative will review the CR by clicking on the CR hyperlink. The Receipt Desk representative will then close the CR Details page, return to the CR task page and assign a Change Package Number, if necessary, using either the Change Package Number field or selecting Auto-Assign Change Package Number to have a unique number applied automatically. If the CR Originator has previously indicated a CPN, then the field will be automatically populated with that number.

STEP 3: The **Receipt Desk** Representative will enter comments, mark certain process steps (workflow tasks) as "ones that can be skipped", identify the Board that will disposition the CR, then select the "Accept" or "Do Not Accept" radio button. Comments are required if the CR is found to be unacceptable.

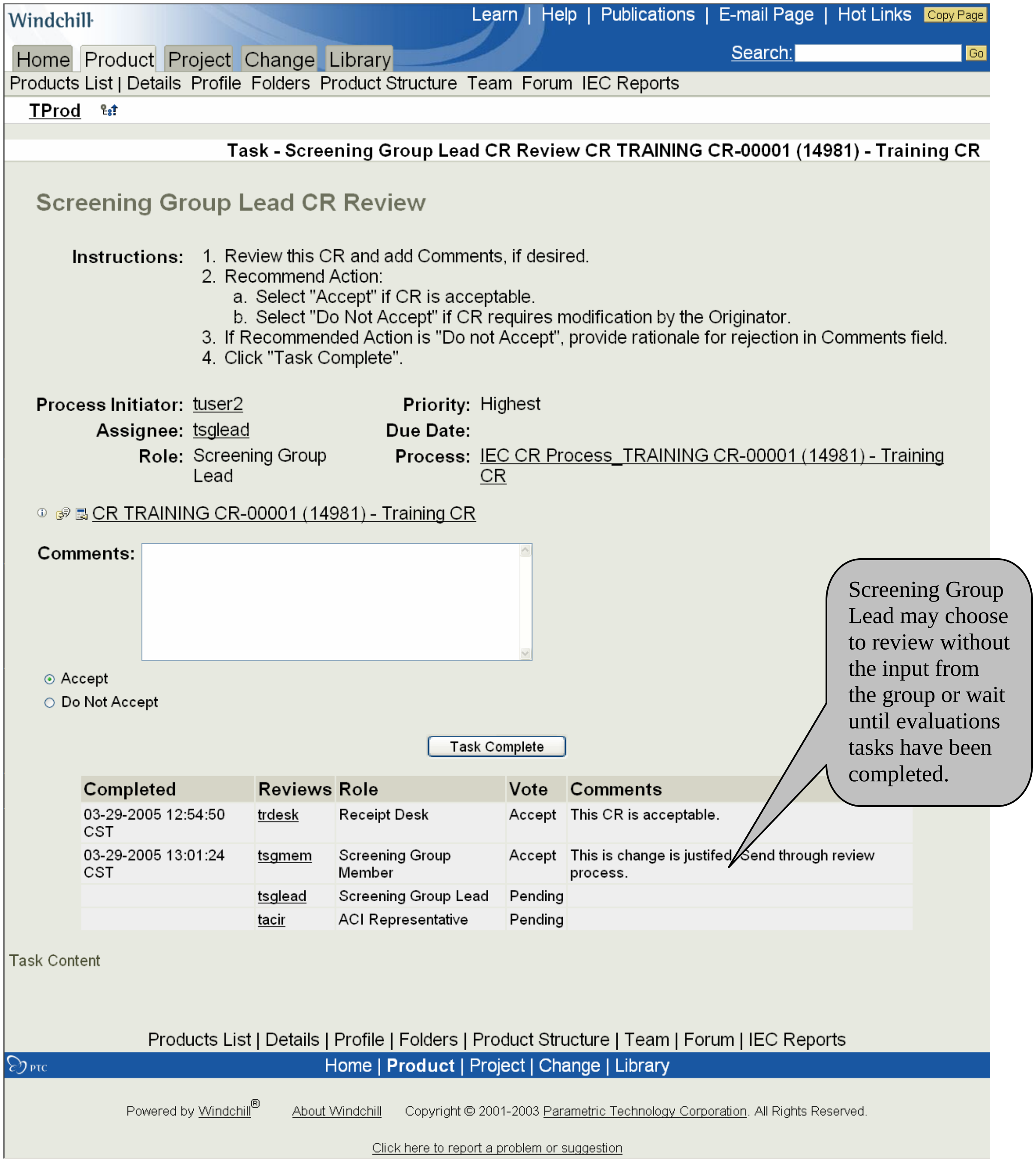
STEP 4: The **Receipt Desk** Representative will click the "Task Complete" button to complete the workflow task.

NOTE: This task will be sent to all DDMS users that have been assigned the Receipt Desk role as specified in the DDMS Program/Project Profile. However, only one person assigned to this role is required to complete the Receipt Desk task.

5.2.3 Screening Group CR Review – Preliminary Review State

If a Screening Group has been specified in the Project Profile and if the Receipt Desk did not elect to skip the Screening Group's review, the Screening Group Lead and the Screening Group Members will receive a workflow task via email notification, and a new task will be listed in the Screening Group Member and Screening Group Lead's Assignments table under the Home tab.

STEP 1: The **Screening Group Lead/Members** will click the Task hyperlink in the email notification OR select the "Screening Group Lead/Members CR Review" task from the **Home** tab, **Overview** page, **Assignments** table.



Screening Group Lead CR Review Task Page

STEP 2: The **Screening Group Lead/Members** review the CR by clicking on the CR hyperlink and then return to the task page to complete the task and select the "Accept" or "Do Not Accept" radio button. If "Do Not Accept" is selected, the Screening Group Lead and Members are required to enter comments in the Comments field.

STEP 3: The **Screening Group Lead/Members** will click the "Task Complete" button to complete the workflow task.

NOTE: The Screening Group Lead and the Members will receive concurrent tasks. The Screening Group Members' review task will be removed from their Assignments Table if the Screening Group Lead completes his or her task before the Screening Group Members.

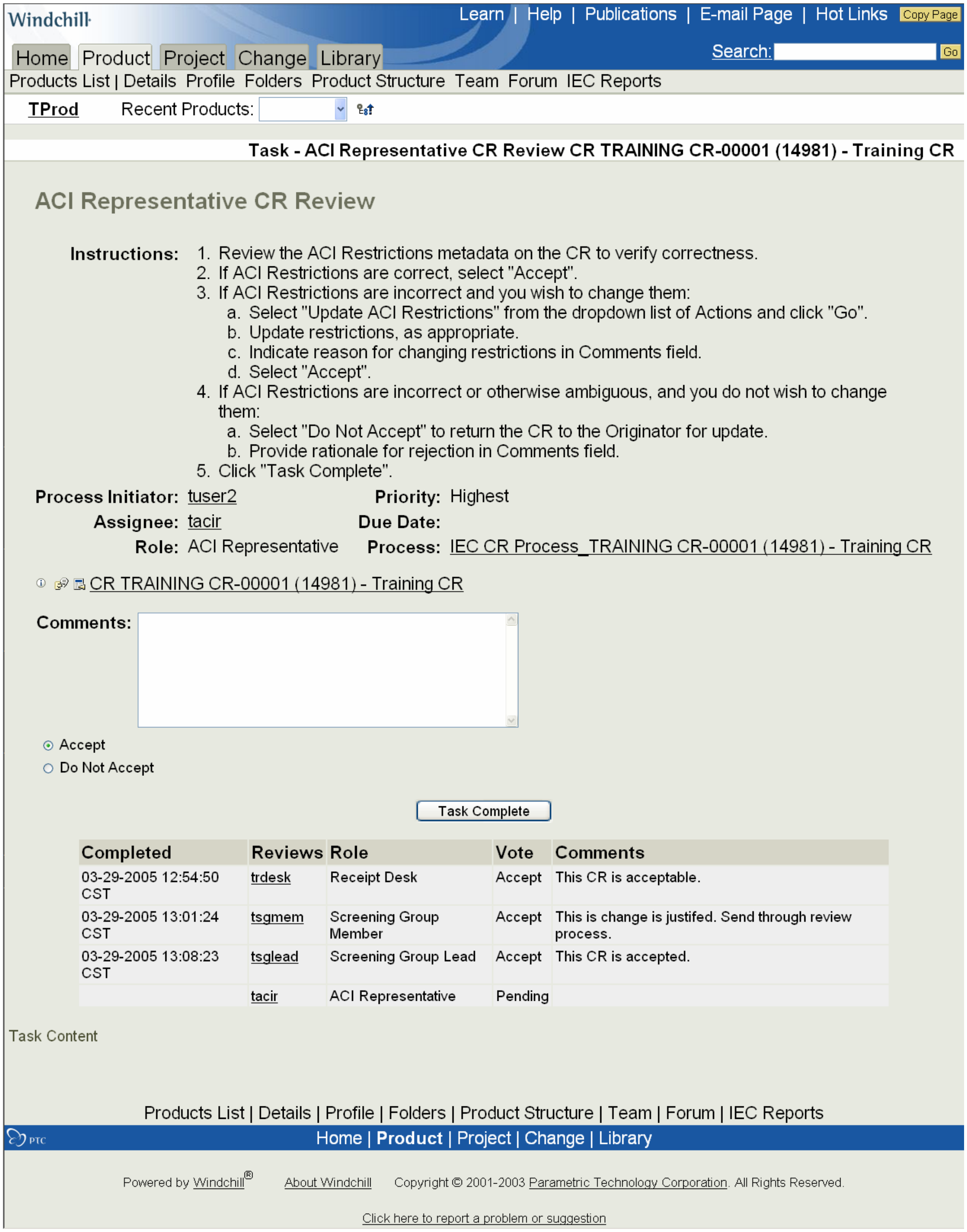
5.2.4 ACI Representative CR Review – Preliminary Review State

In parallel with the Screening Group, the ACI Representative will receive a task via email notification to review the CR to ensure proper ACI marking, and a new task will be listed in the ACIR Assignments table under the Home tab. The ACI Representative is identified in the Project Team. If no one has been identified in this role, this task is skipped and the CR will then go directly to the Project Engineer (Section 5.2.5).

Administratively Controlled Information (ACI) is official NASA and/or government information and/or material of a sensitive but unclassified nature, which does not contain national security information and, therefore, cannot be classified, which nonetheless should be protected against inappropriate disclosure.

For further information on ACI and export controlled data see Section 5.2.1.1.

STEP 1: The **ACI Representative** will click the Task hyperlink in the email notification OR select the "ACI Representative CR Review" task from the **Home** tab, **Overview** page, **Assignments** table.



ACI Representative CR Review Task Page

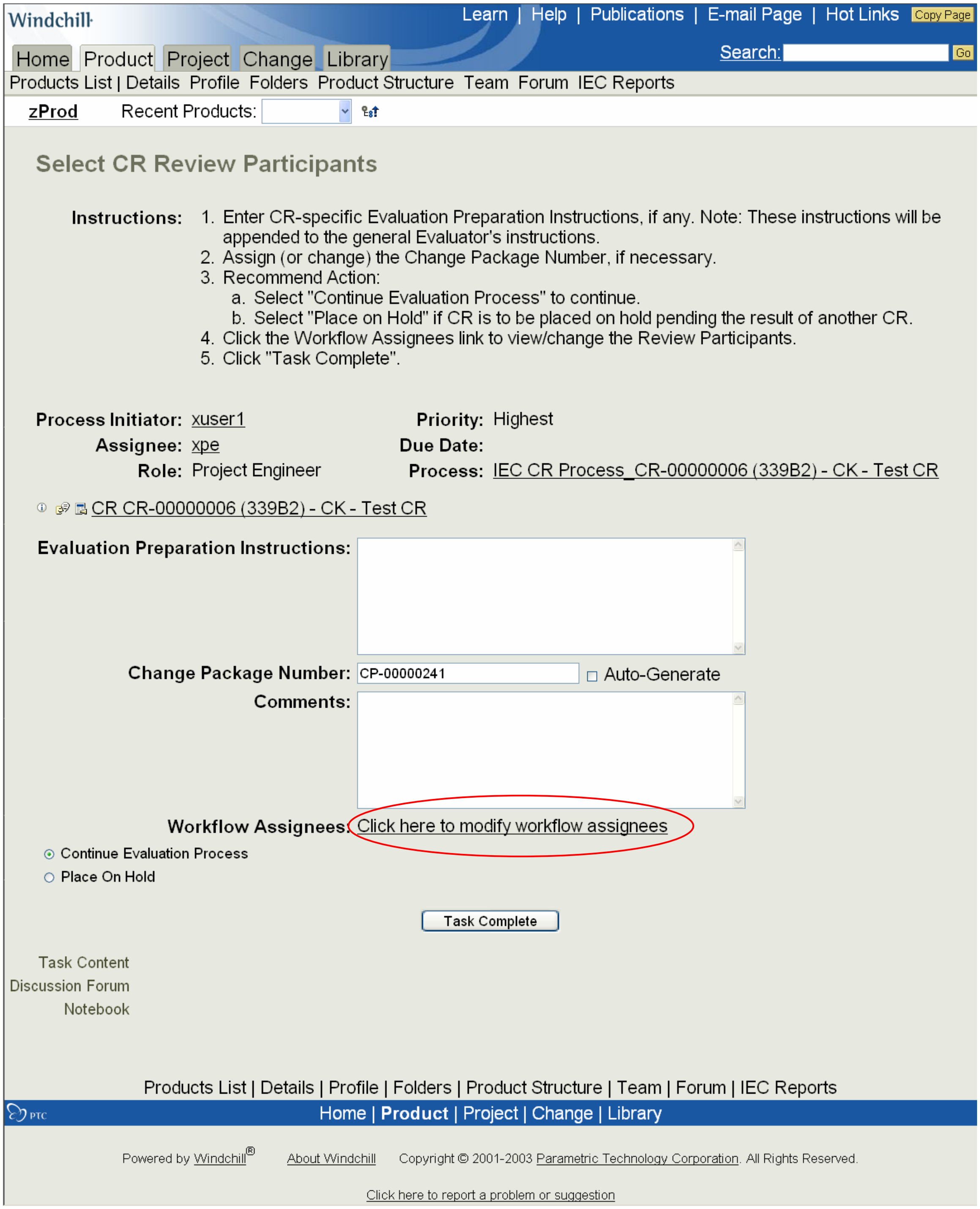
STEP 2: The **ACI Representative** will review the CR for proper ACI markings by clicking on the CR hyperlink, then return to the task page to complete the task, and select the “Accept” or “Do Not Accept” radio button. If the markings are not correct, the ACI Representative is required to enter the appropriate markings as comments and to select the “Do Not Accept” radio button

STEP 3: The **ACI Representative** will click the "Task Complete" button to complete the workflow task.

5.2.5 Select CR Review Participants – Prepare for Evaluation State

Once both the Screening Group and the ACI Representative Reviews have been completed and the CR is acceptable, the Project Engineer will receive a task via email notification to Select CR Review Participants for the Evaluation process, and a new task will be listed in the Project Engineer's Assignments table under the Home tab. The Project Engineer may assign a Change Package Number (CPN) to the Change using the field on the Workflow Task if it has not previously been assigned. The Project Engineer may also place processing "On Hold" pending the result of another CR.

STEP 1: The **Project Engineer** will click on the Task hyperlink in the email notification OR select the "Select CR Review Participants" task from the **Home** tab, **Overview** page, **Assignments** table.



Select CR Review Participants Task Page

STEP 2: The **Project Engineer** will assign or reassign a Change Package Engineer (CPE), Mandatory Evaluators, and Optional Evaluators by clicking on the Workflow Assignees link as shown above.

STEP 3: The **Project Engineer** will then enter any evaluation preparation instructions and choose the "Place on Hold" or "Continue Evaluation Process" radio button. If the

Project Engineer selects the "Place on Hold" button, a "CR on Hold" task will appear in the Project Engineer's Assignments table under the Home tab. When the Project Engineer decides to resume the review process, he will click on the task and continue the review process for the CR.

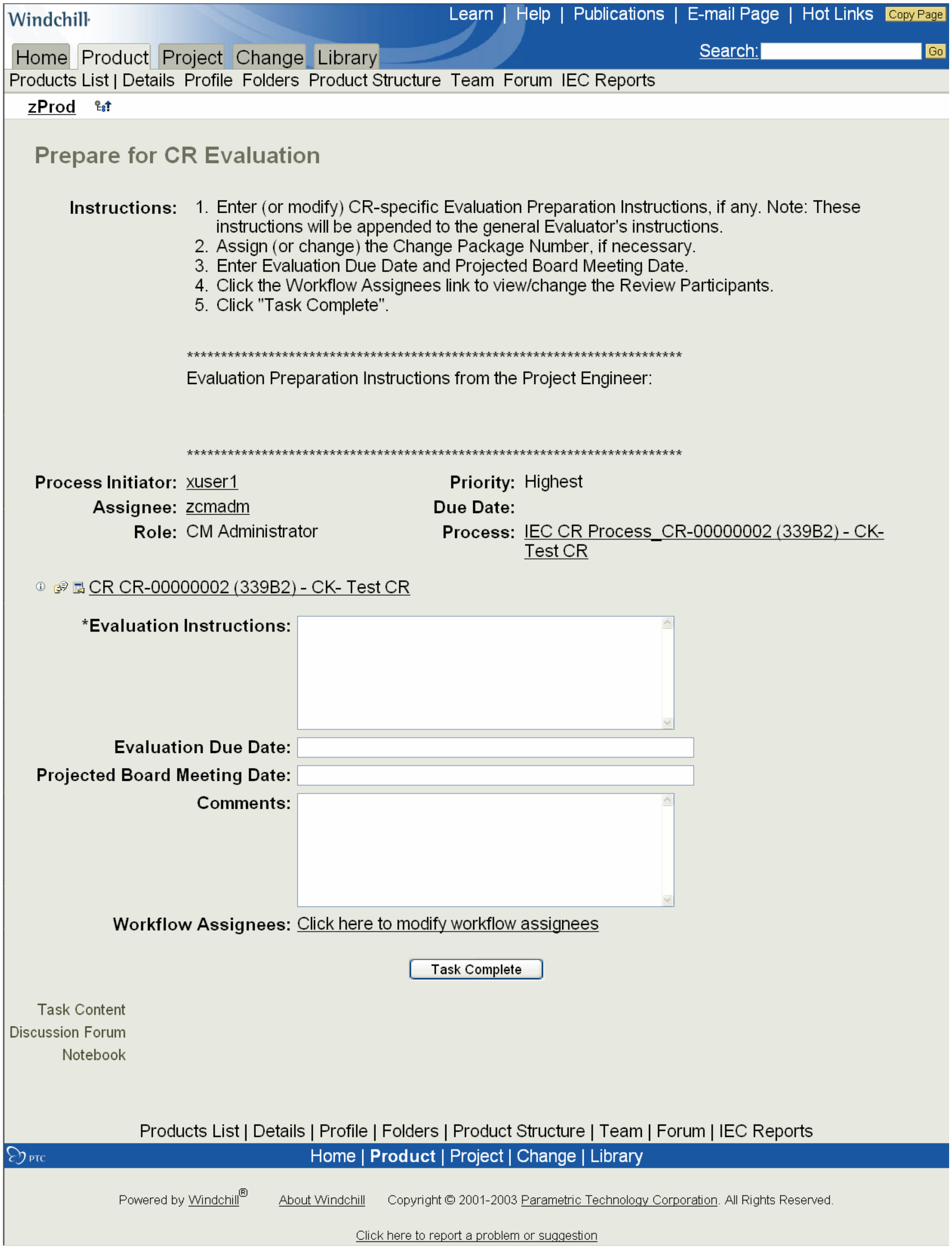
STEP 4: The **Project Engineer** will click the "Task Complete" button to complete the workflow task and continue the CR in the review process.

NOTE: Only DDMS Project or Product Team Members may be selected to be a CR Review Participant. If the Project Engineer would like to select a user to be a review participant and that user is not a team member, the user must be invited to the DDMS Project or Product by the DDMS Project Manager.

5.2.6 Prepare for CR Evaluation

After the Project Engineer has selected the CR Review Participants, the CM Administrator will receive a workflow task via an email notification to Prepare for CR Evaluation. Also, a new task will be listed in the CM Administrator's Assignments table under the Home tab. Once this task is complete, DDMS will automatically create an Evaluation task for each of the participants listed in the Mandatory or Optional Evaluators' roles and the Change Package Engineer (CPE) assigned to the CR.

STEP 1: The **CM Administrator** will click the Task hyperlink in the email notification OR select the "Prepare for CR Evaluation" task from the **Home** tab, **Overview** page, **Assignments** table.



Prepare for CR Evaluation Task Page

STEP 2: The **CM Administrator** will review the document by clicking on the document hyperlink, verify the list of Mandatory and Optional Evaluators and the CPE, provide instructions, any necessary comments, the evaluation due date, and the projected

Board meeting date. Also, the CM Administrator may add or remove any evaluators at this time by following the link to the Workflow Assignees.

STEP 3: The **CM Administrator** will click the "Task Complete" button to complete the workflow task and begin the evaluation process.

NOTE: Once committed, evaluations will appear at the bottom of the Change Request details page. Click on the Details icon to the right of the Change Evaluation number to view the committed Evaluations.

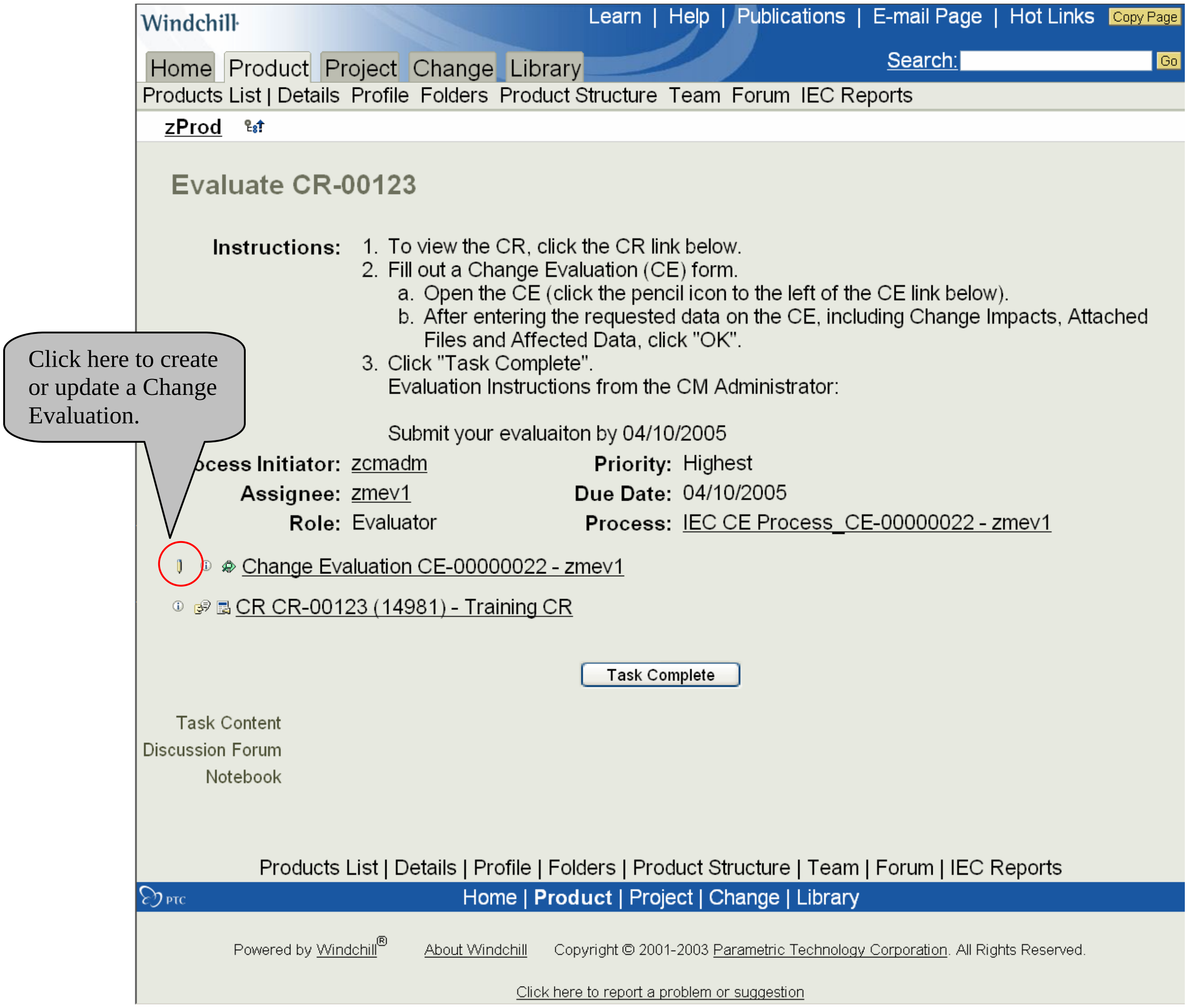
The Change Evaluations section will only display those Evaluations that the current user has access to view.

NOTE: The Change Request details page is the only screen that provides the ability to view the Evaluations. Also, each Evaluation will run in its own workflow process. All of these will be brought together in the Consolidate Evaluations task which is described Section 5.2.8.

5.2.7 Evaluation

Once the CM Administrator has completed the evaluation preparation, the evaluators will receive an Evaluate CR task via email notification to evaluate the CR and prepare a Change Evaluation (CE). The Evaluator will select the Update icon to the left of the CE name on the Evaluate CR task page. Both the hyperlink from the workflow and the Update action from the properties page will display a pop-up window to accept the Evaluation data.

STEP 1: The **CR Evaluator** clicks the Task hyperlink in the email notification OR selects the "Evaluate" task from the **Home** tab, **Overview** page, **Assignments** table.

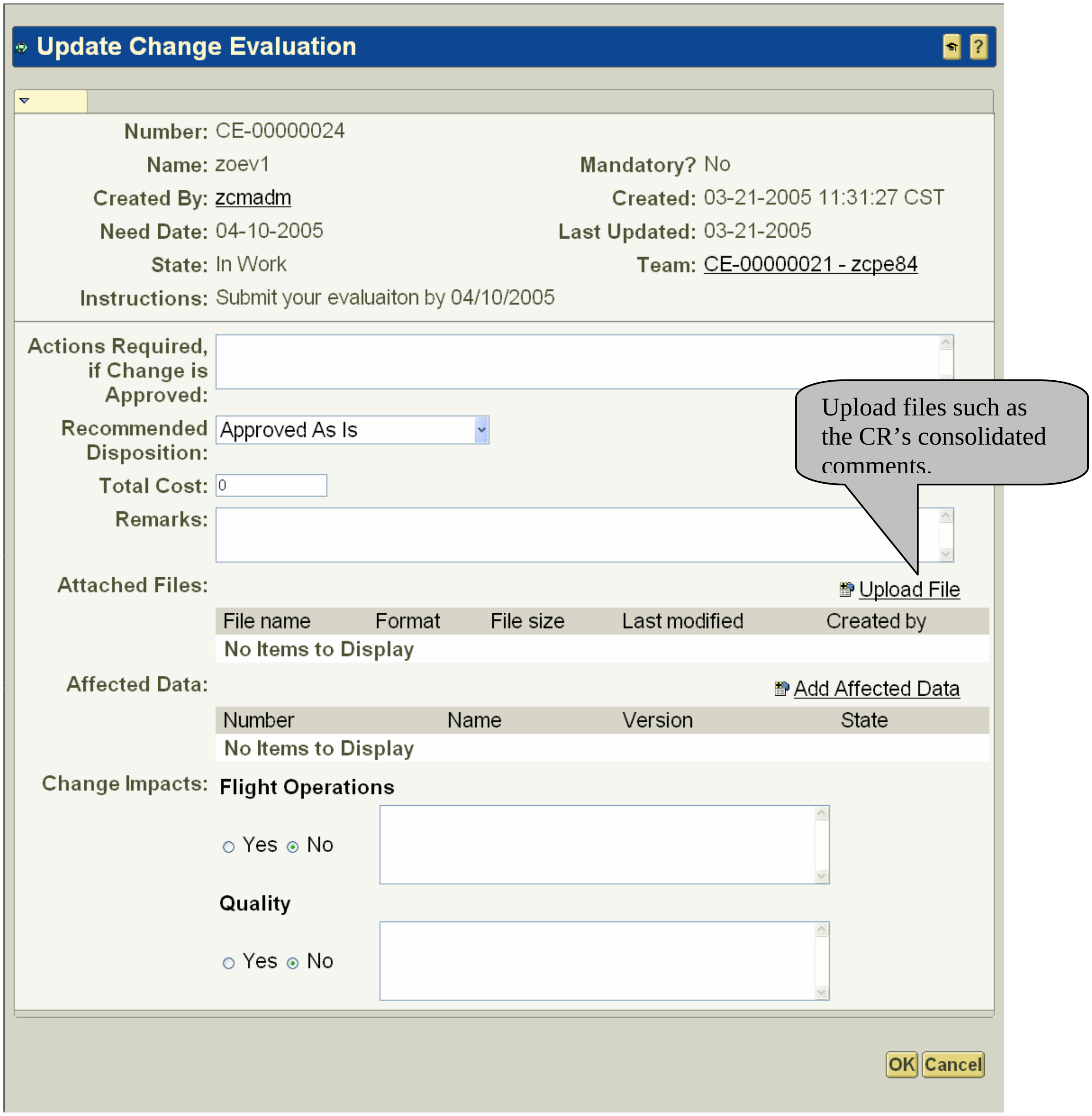


Evaluation Task Page

STEP 2: The **CR Evaluator** will follow the directions below to complete the Change Evaluation (CE):

1. To view the CR, click the CR link on your task page.
2. Fill out a Change Evaluation (CE) form as follows:
    a. Open the CE by clicking on the Update Icon located left of the CE link on your task page. Evaluation instructions have been provided within the Header of the CE.
    b. Select a Recommended Disposition
    c. Indicate the Change Impacts that would result from approval of this CR. Attach any files (study, analysis, etc.) that would support your recommended disposition. Indicate any documents, drawings, etc., that would be affected by approval of this CR.
    d. After entering the requested data on the CE, click "OK."
    e. Return to the Evaluation task page and Click "Task Complete."

3. After the CE has been completed, the user may view the CE by clicking on the CE link on the evaluation task page.



Update Change Evaluation Page

STEP 3: The **Evaluator** will return to the task page and click the "Task Complete" button when he or she is ready to commit the CE and complete the workflow task

NOTE: During the evaluation process, evaluators may continue to update and refine the evaluations. However, evaluations must be explicitly committed to be consolidated and incorporated into the summary evaluation by the Change Package Engineer. Evaluators commit the evaluations by completing the Evaluate CR workflow tasks. Any uncommitted Evaluations will be closed and terminated automatically by the system when the CPE commits the summary evaluation.

5.2.7.1 Viewing Evaluations

An individual CR Evaluator's own CE plus any other CEs related to the given CR that have already been committed by other evaluators are shown on the Change Request details page under the Evaluations section.

As shown below, the CPE may view all evaluations by clicking on the Details icon to the left of the Change Request link on their task page.

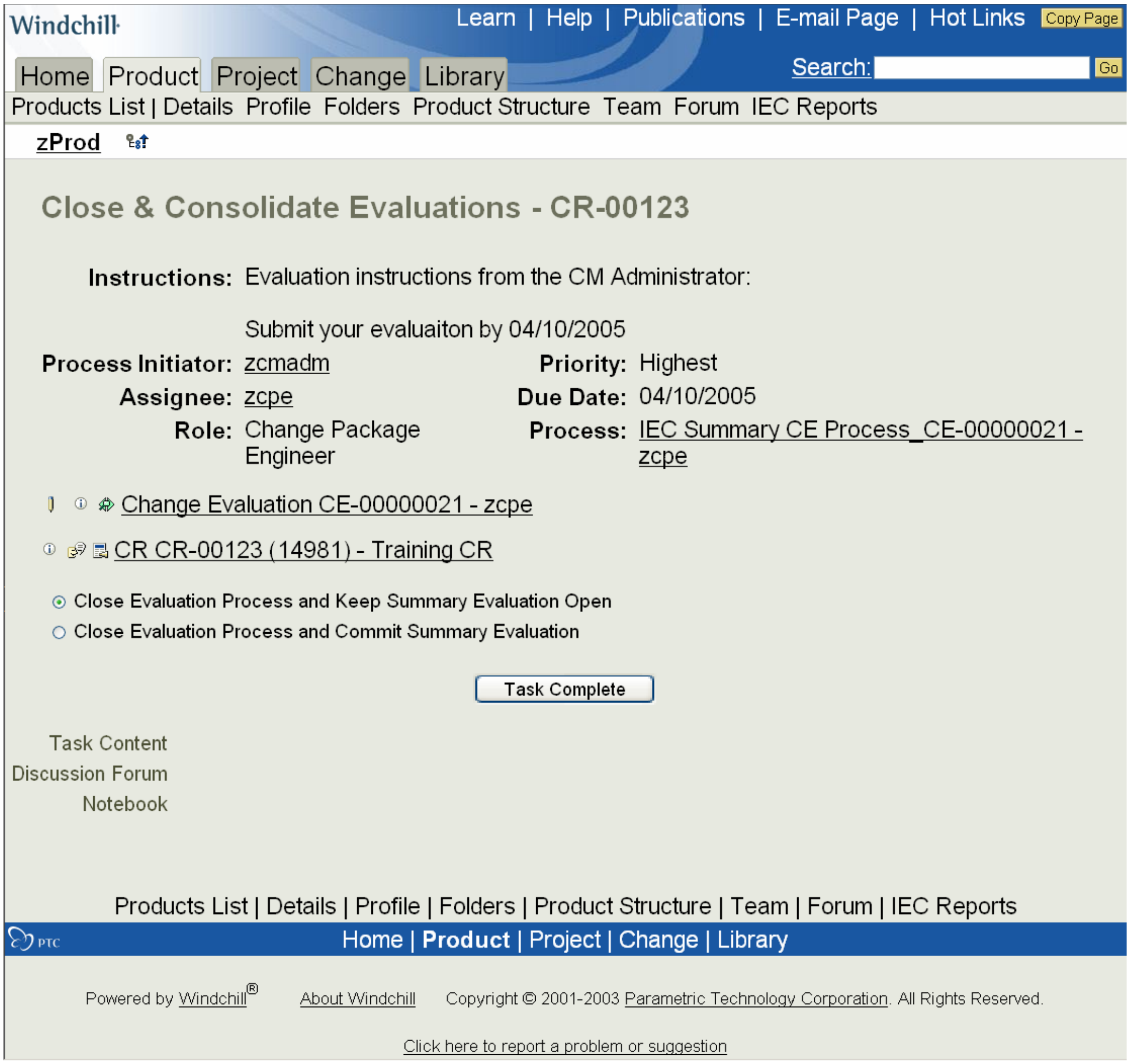
Number	Actions	Name	Need by	Mandatory	State	Disposition	Last Updated
CE-00000012		tcpe	05/11/2005	Yes	In Work		03/29/2005 01:39
CE-00000013		tmev1	05/11/2005	Yes	Committed	Approved As Is	03/29/2005 02:00
CE-00000014		tmev2	05/11/2005	Yes	Committed		03/29/2005 01:58
CE-00000015		tope1	05/11/2005	No	Committed	Approved As Is	03/29/2005 01:46
CE-00000016		tope2	05/11/2005	No	In Work		03/29/2005 01:39
CE-00000017		tsgmem	05/11/2005	No	In Work		03/29/2005 01:39
CE-00000018		tbm1	05/11/2005	No	In Work		03/29/2005 01:39
CE-00000019		tsglead	05/11/2005	No	In Work		03/29/2005 01:39
CE-00000020		tbm2	05/11/2005	No	In Work		03/29/2005 01:39
CE-00000021		tbc	05/11/2005	No	In Work		03/29/2005 01:39
CE-00000022		tsec	05/11/2005	No	In Work		03/29/2005 01:39

As the table shows, only three CEs have been committed. When the Details Page action icon for a given CE is selected, a pop-up window will appear with the details of the Evaluation.

5.2.8 Close and Consolidate Evaluations

During the Evaluation process, the Change Package Engineer (CPE) will receive a workflow task via email notification to Close and Consolidate Evaluations and recommend a disposition for the Change Board. The CR may be put on hold if the CPE has determined that the CR should be escalated to another Board. If this is the case, the CPE will route a copy of the current CR through its own process and wait for the disposition of the new CR before continuing. Once the CPE has submitted a consolidated evaluation, any outstanding evaluation tasks will be terminated and removed from each Evaluator's work list.

STEP 1: The **Change Package Engineer (CPE)** will click the Task hyperlink in the email notification OR select the "Close and Consolidate Evaluations" task from the **Home** tab, **Overview** page, **Assignments** table.



Close & Consolidate Evaluations Task Page

STEP 2: The **CPE** will review the CR by clicking the CR hyperlink and then return to this workflow task page to complete the review. The CPE will then select the "Update Evaluation" icon, enter a disposition, complete the summary evaluation, and click the "OK" button on the CE window. The CPE must select a "Recommended Disposition" from the CE's Recommended Disposition drop down list in order for the CR process to continue to the Disposition Prep state. The individual evaluations may be attached to the summary CE via the Upload File link. (If the CPE fails to select a recommended disposition, the CPE will receive a "Consolidated Evaluations" task via email notification.)

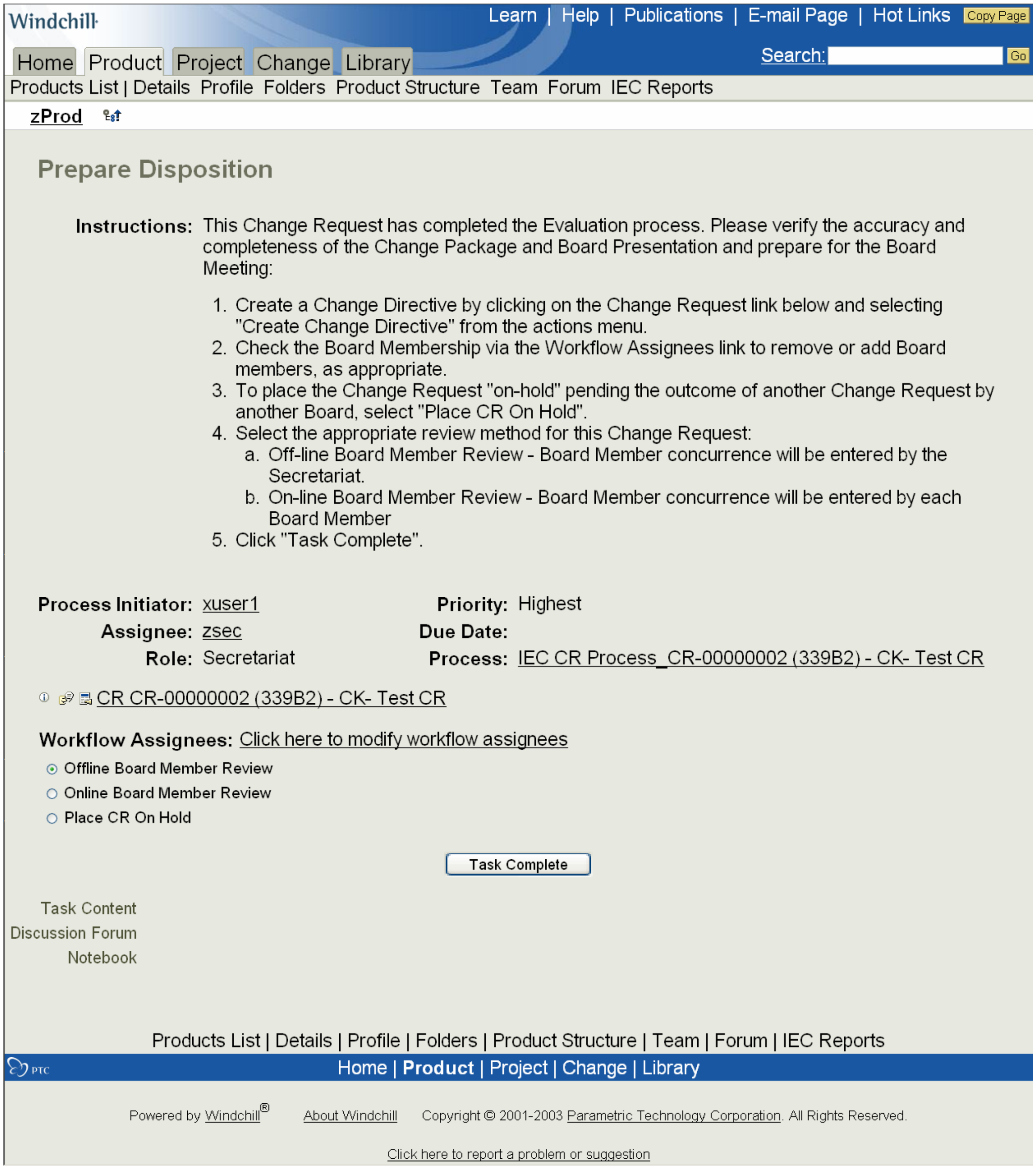
STEP 3: The **CPE** will select the "Close Evaluation Process and Keep Summary Evaluation Open" or "Close Evaluation Process and Commit Summary Evaluation" radio button when ready to commit the summary CE. If the CPE chooses to keep the summary evaluation open, the CPE will receive a “Consolidate Evaluations” task via email notification.

STEP 4: The **CPE** will click the “Task Complete” button to complete the workflow task.

5.2.9 Prepare Disposition

When the Evaluation process has been completed for the CR, the Secretariat will receive a task via email to prepare the Change Package for the Board Meeting. A task will also appear in the Secretariat’s Assignment Table under the Home tab.

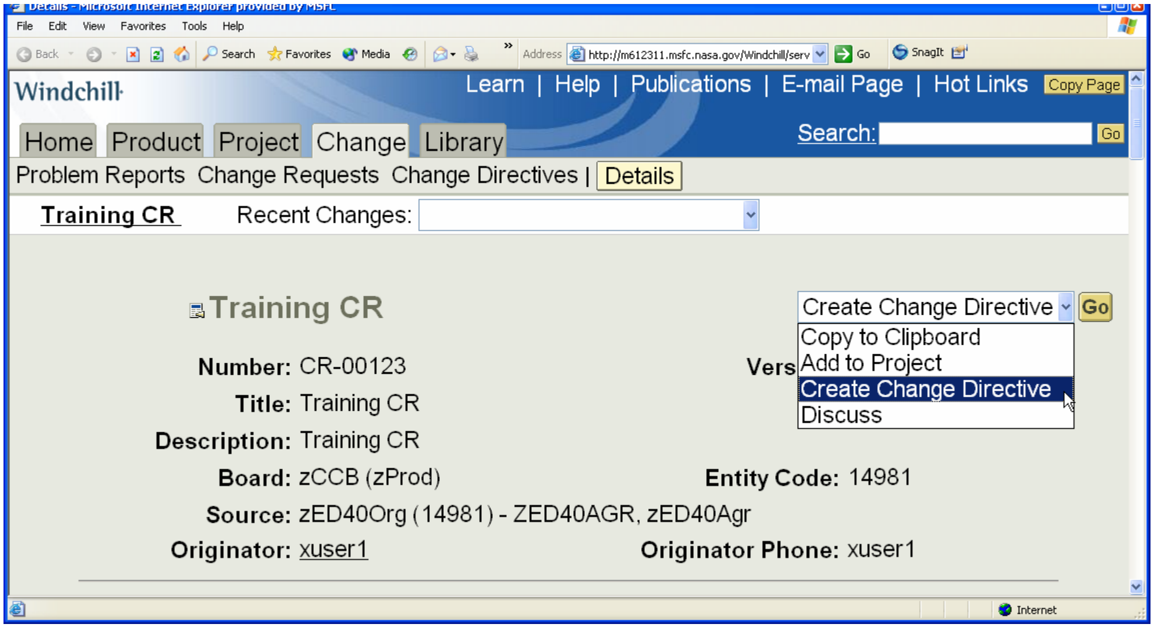
STEP 1: The **Secretariat** will click the Task hyperlink in the email notification OR select the “Prepare Disposition” task from the **Home** tab, **Overview** page, **Assignments** table.



Prepare Disposition Task Page

STEP 2: From the Prepare Disposition task page, the **Secretariat** will select the CR link for review.

STEP 3: The **Secretariat** will click the Details icon ⓘ to the left of the CR link. The CR details page will appear and the Secretariat will select "Create Change Directive" from the drop down menu and click "Go".

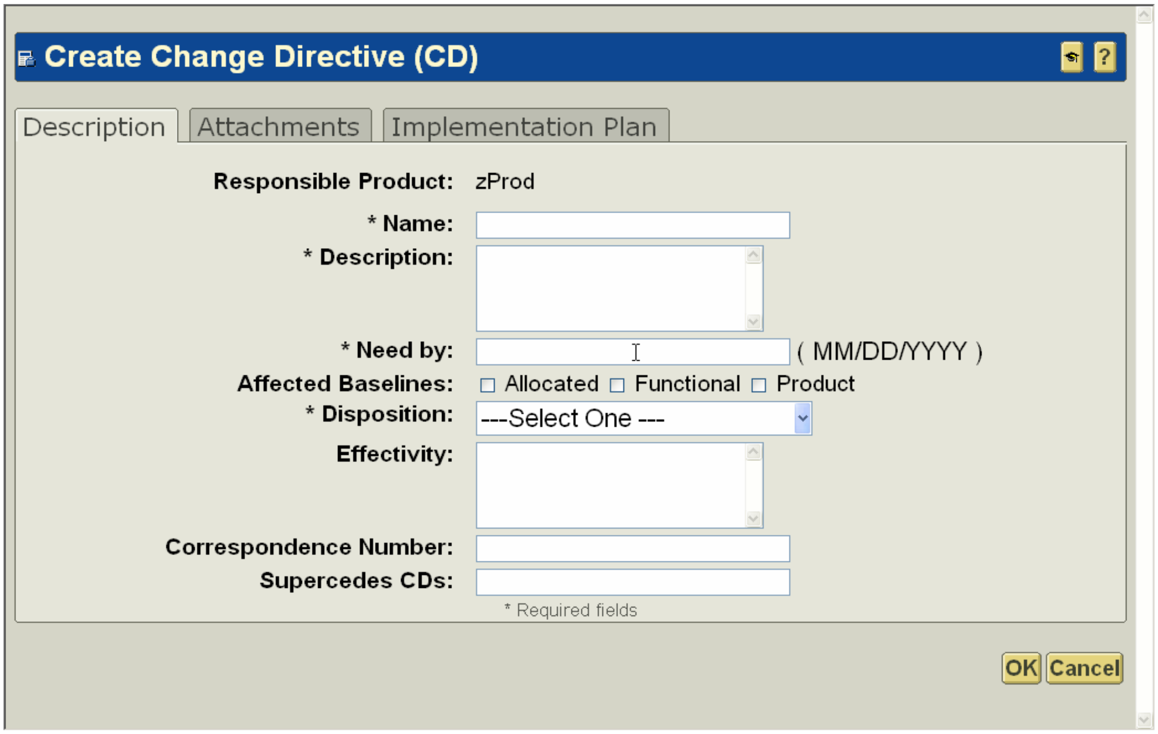


Create Change Directive Drop Down Action List

NOTE: This action will only be available to the Secretariat when the Change Request is in the Disposition Prep state.

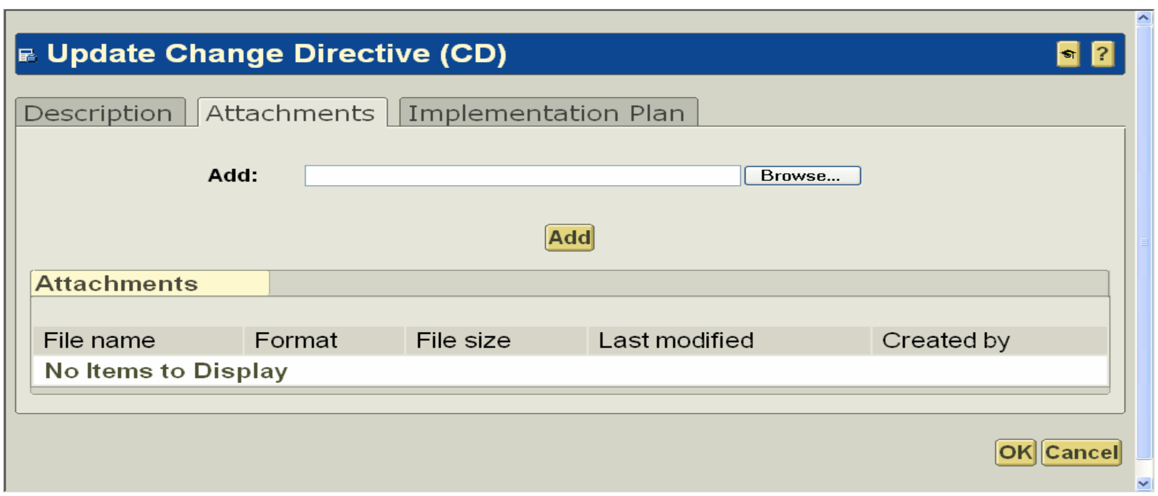
STEP 4: The "Create Change Directive" screen will pop-up in a separate window as shown below. The **Secretariat** will provide the required information to create the Change Directive (CD). **Do not click OK until all information is entered concerning attachments and implementation tasks.**

NOTE: If the Secretariat prematurely completes the task without entering information concerning task implementation, the user will need to navigate to the CR's Details page and select update from the drop down menu then follow the Implementation Task Plan instructions in Step 6 below.



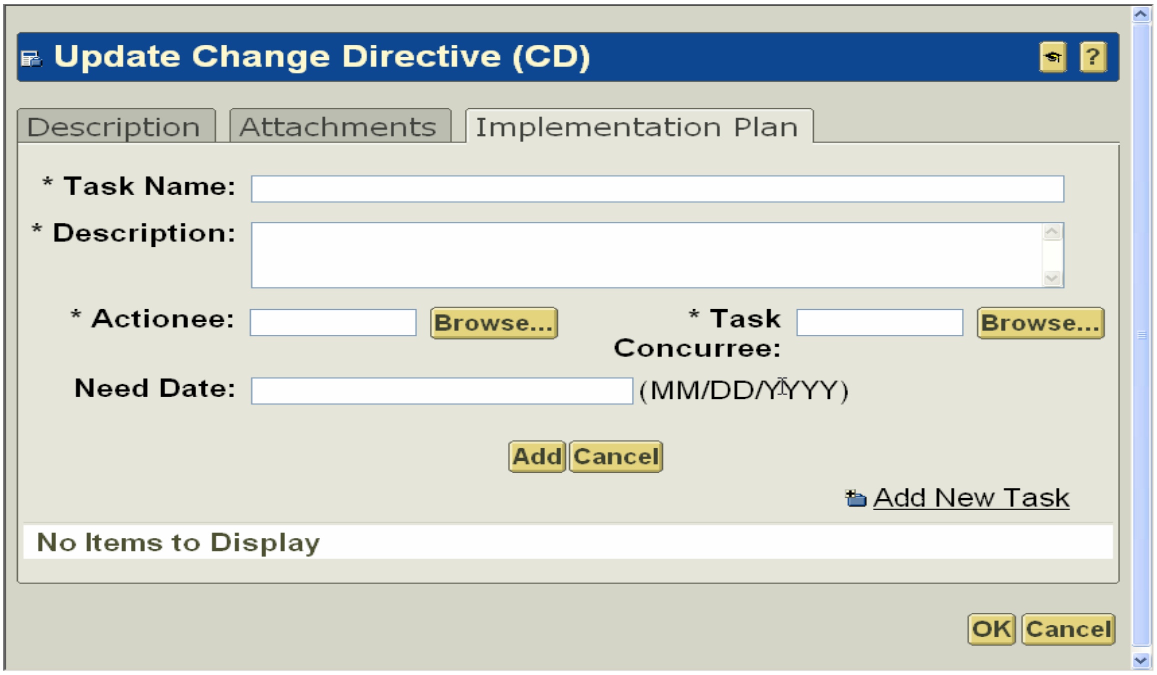
Create Change Directive Description Tab

STEP 5: The **Secretariat** will click the "Attachments" tab to upload electronic files that support the Change Directive. The Secretariat will then click the Browse button to open a File Chooser to select individual files, such as a Word Document, and then browse to select the desired file and click "Open". This will display the path to the file in the Add field. The Secretariat will click the "Add" button on the "Attachments" screen to upload the file to the server and to add the attachment to the CD. Do not click OK unless there are no tasks to be assigned or further attachments.



Change Directive Attachments Page

STEP 6: The **Secretariat** will then click the "Implementation Plan" tab to create Change Tasks associated with the CD. Then click the "Add New Task" link.



Create Change Directive Implementation Tab

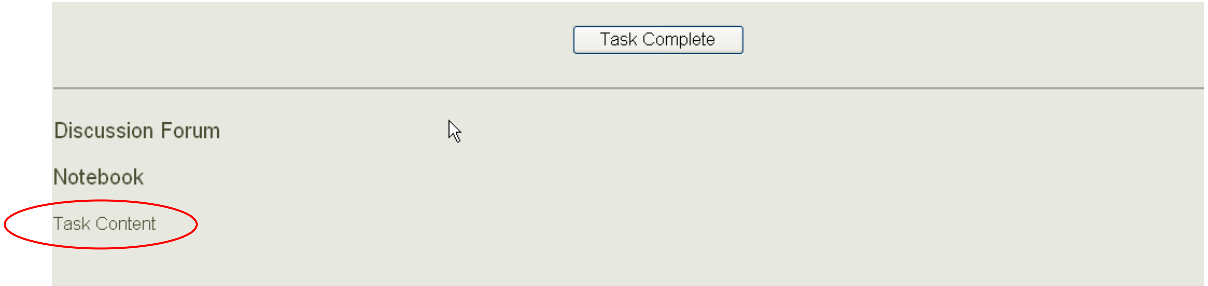
NOTE: The Change Tasks workflow will instruct the Actionee to begin implementing the tasks. This Change Task workflow process will not begin until the entire Change Package has been Approved by the Board.

STEP 7: The **Secretariat** will name and describe the new task and assign an Actionee and a Task Concurree (browse through user list) then click "Add" to add the new task. Selecting an Actionee and a Task Concurree is required to complete the task definition. The Secretariat will then click "OK" to complete the Implementation Plan of the CD or click "Add New Task" to define additional tasks. Then click "OK" again to complete the CD creation.

STEP 8: The **Secretariat** will return to the Prepare Disposition task page and verify the Board Chair and the Board Members by using the Workflow Assignees link.

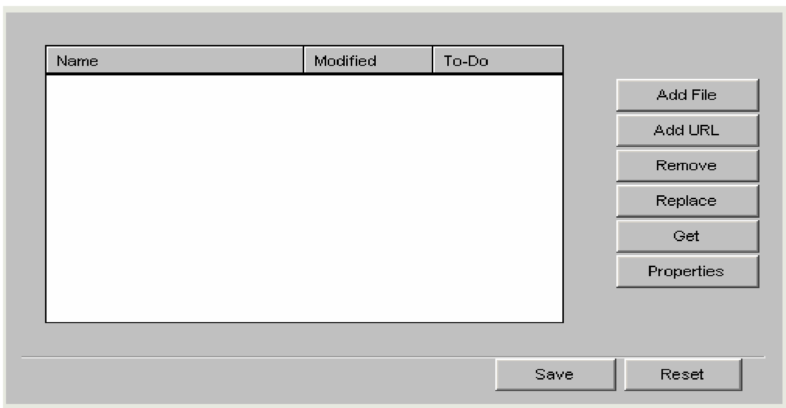
STEP 9: The **Secretariat** will select the Online Board Member Review button if board members are to receive email notification and workflow task for their concurrence. Or, the Secretariat will select the Offline Board Member Review Button if board members will be contacted for their concurrence outside DDMS. Or, the Secretariat will select the Place CR on Hold button if CR processing is to be suspended for an extended period of time.

STEP 10: The **Secretariat** may attach the Board Agenda or any other files needed for the Board review by using the "Task Content" link at the bottom of the "Prepare Disposition" task screen.



Task Content Link

The **Secretariat** will click the **Task Content** hyperlink to display the following applet to upload the file, and then click **Add File** to browse to the Agenda, and then click **Save** to add the agenda. Adding files through this link is the best way to attach files that are only temporarily needed and are only related to a specific workflow task such as Prepare Disposition. However, once the workflow task has been completed, the file is not readily available for viewing.



Task Content Link –Add File Applet

STEP 11: The **Secretariat** will click the "Task Complete" button to complete the workflow task. Once the CD is saved, the CD Details page will be created and can be viewed under the Change tab, Change Directive Details page.

5.2.9.1 Viewing and Updating a Change Task

5.2.9.1.1 Viewing a Change Task

Change Tasks are shown in the Tasks section of the CD Details page under the Change tab. On this page, there are hyperlinks to the Attached Files, Affected Data, and Resulting Items. Each Change Task has its own expandable/collapsible sections, which make it easier to view multiple tasks at once.

5.2.9.1.2 Updating a Change Task

Also on the CD Details page, there is an actions drop down list that provides an “Update” action. When this action is selected, an “Update Change Task” pop-up window appears. Task Actionees would use this screen to add Implementation data such as new Document versions, remarks, or new due dates.

5.2.9.2 Viewing and Updating a Change Directive

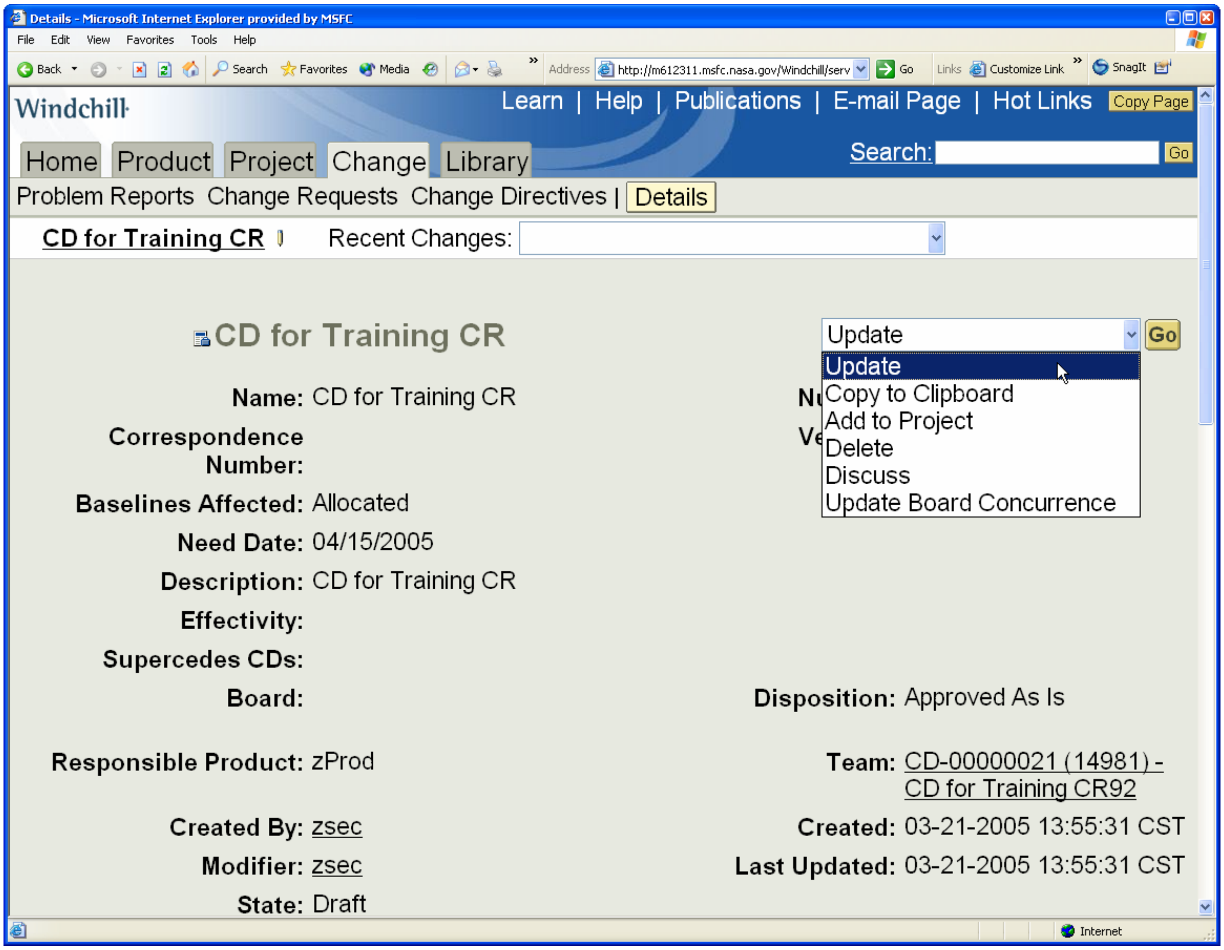
5.2.9.2.1 Viewing a Change Directive

Select the **Change Directive Details** page from the **Change** tab, **Change Directives** page. The CD Details page contains several Expandable/Collapsible Sections that display any data entered on the “Create Change Directive” tabs – such as Attachments, Related CRs, Tasks, and Board Concurrence.

5.2.9.2.2 Updating a Change Directive

If the Secretariat has not completed his or her task and sent the Change Directive to the Board, it may be updated by the Secretariat.

The **Secretariat** will select the “Update” action from the Change tab, Change Directives, Details page then click “Go” to open an “Update Change Directive” pop-up window.



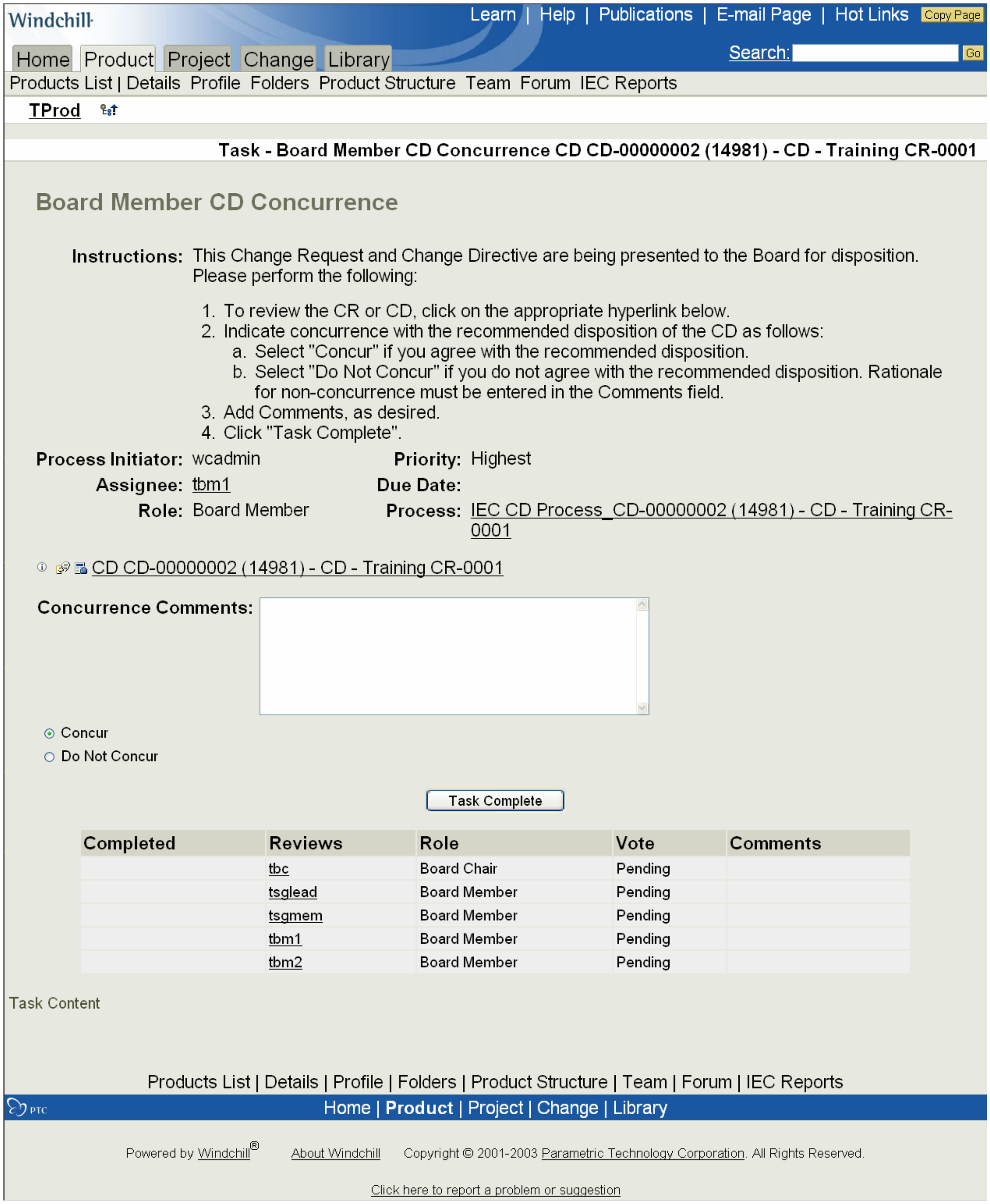
Update Change Directive Drop Down Action List

The Secretariat can then make necessary changes. Tasks can be removed or modified, and new tasks can also be added at this time.

5.2.10 Board Member CD Concurrence

During an Online Board Review, each Board Member will receive a workflow task via email notification to provide concurrence with the recommended disposition of the Change Directive. A new task is also listed in the Board Member's Assignments table under the Home tab. All pending and completed concurrence actions for this CD are shown at the bottom of the screen. This feature allows the user to see comments submitted as each action is completed. During the Secretariat portion of the workflow, the Board member concurrence can be skipped and the CD can be sent for approval directly to the Board Chair.

STEP 1: The **Board Member** clicks the Task hyperlink in the email notification OR selects the "Board Member CD Concurrence" task from the **Home** tab, **Overview** page, **Assignments** table.



Board Member CD Concurrence Task Page

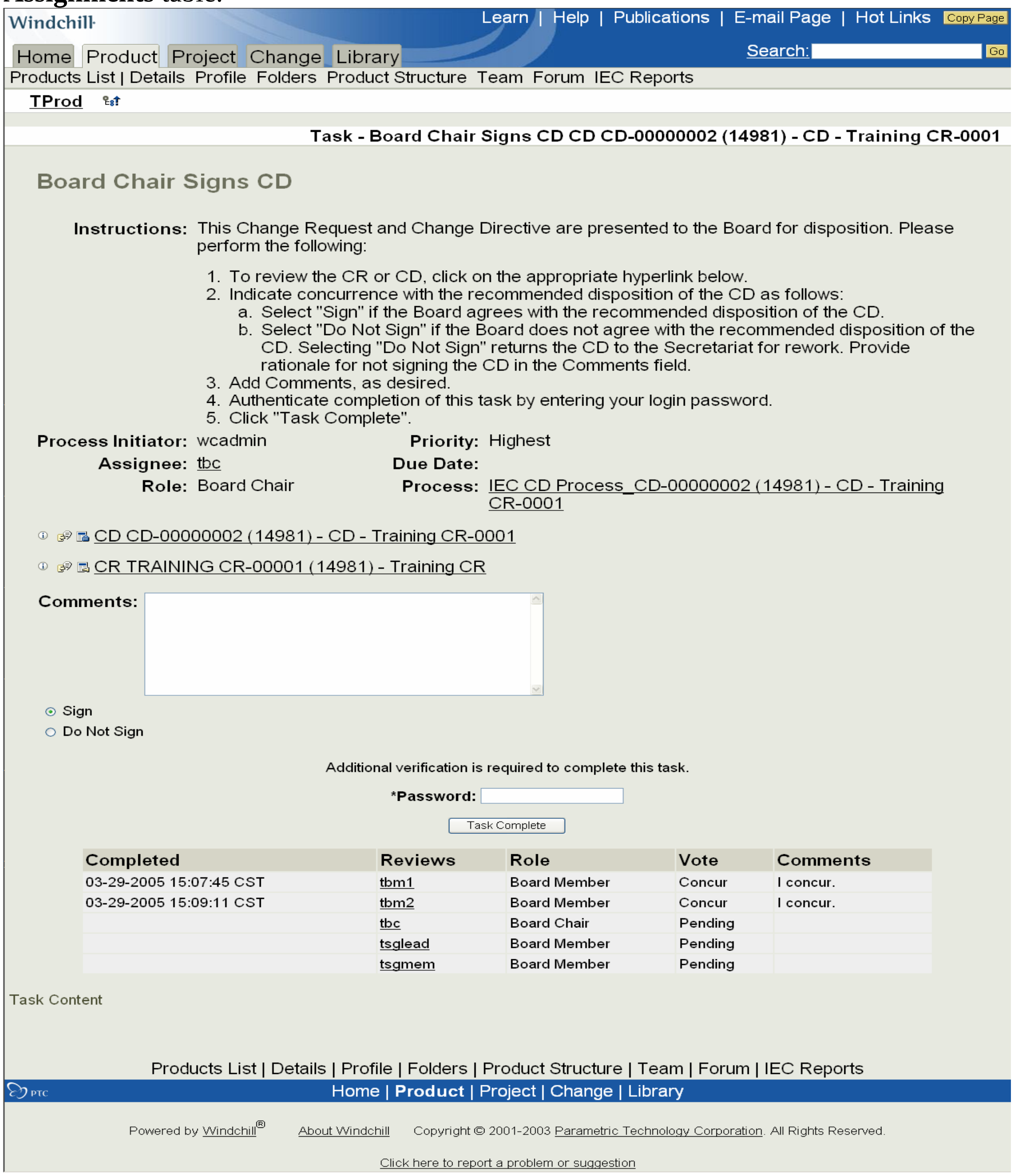
STEP 2: The **Board Member** will review the CD by clicking on the CD link and then return to the task page and select “Concur” or “Do Not Concur”.

STEP 3: The **Board Member** will then click the “Task Complete” button to complete this workflow task.

5.2.11 Board Chair Signs CD

Concurrently with the Board Members, the Board Chair receives a task via email notification to approve the Change Directive. A new task will also appear in the Board Chair's Assignment table under the Home tab.

STEP 1: The **Board Chair** clicks the Task hyperlink in the email notification OR selects the "Board Chair Signs CD" task from the **Home** tab, **Overview** page, **Assignments** table.



Board Chair Signs CD Task Page

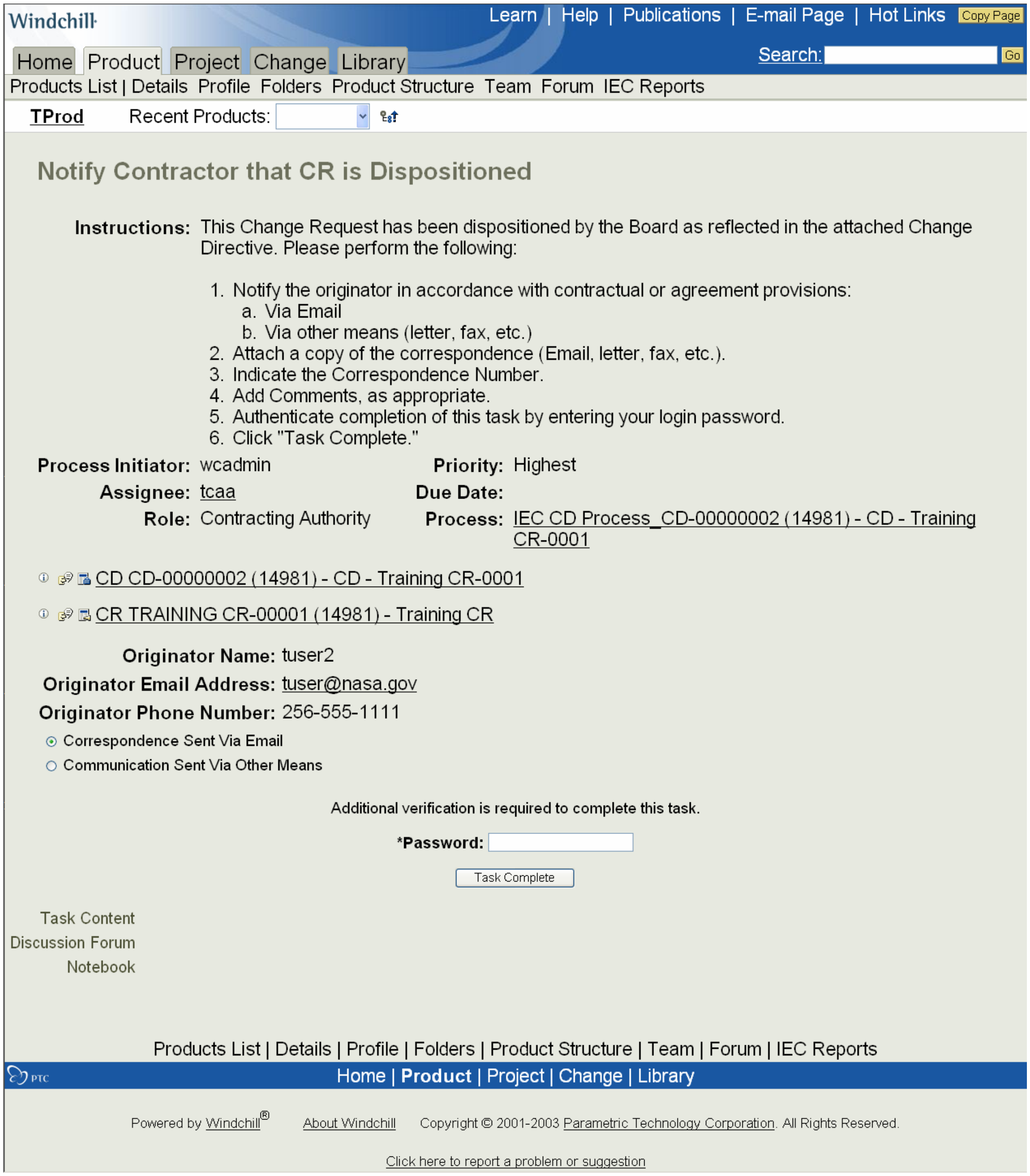
STEP 2: The **Board Chair** can click on the link for the CR and review the CPE's consolidated disposition that is found attached to the CR. The Board Chair will then return to the task page and click on the link to the CD. The Board Chair will return to the task page again and select the "Sign" or "Do Not Sign" radio button. The Board Chair is required to enter his or her password to authenticate the approval of the CD.

STEP 3: The **Board Chair** will click the "Task Complete" button to complete this workflow task.

5.2.12 Notify Contractor/Originator of Change Disposition

If the CR is produced by a Contractor or an External Agency and the Board has dispositioned the Change Package, the Contracting Authority will receive a workflow task via email notification to communicate the Board's disposition to the contractor or the external agency; otherwise the CR Creator will automatically receive notification of the disposition of the CR.

STEP 1: The **Contracting Authority** will click the Task hyperlink in the email notification OR select the "Notify Contractor that CR is Dispositioned" task from the **Home** tab, **Overview** page, **Assignments** table.

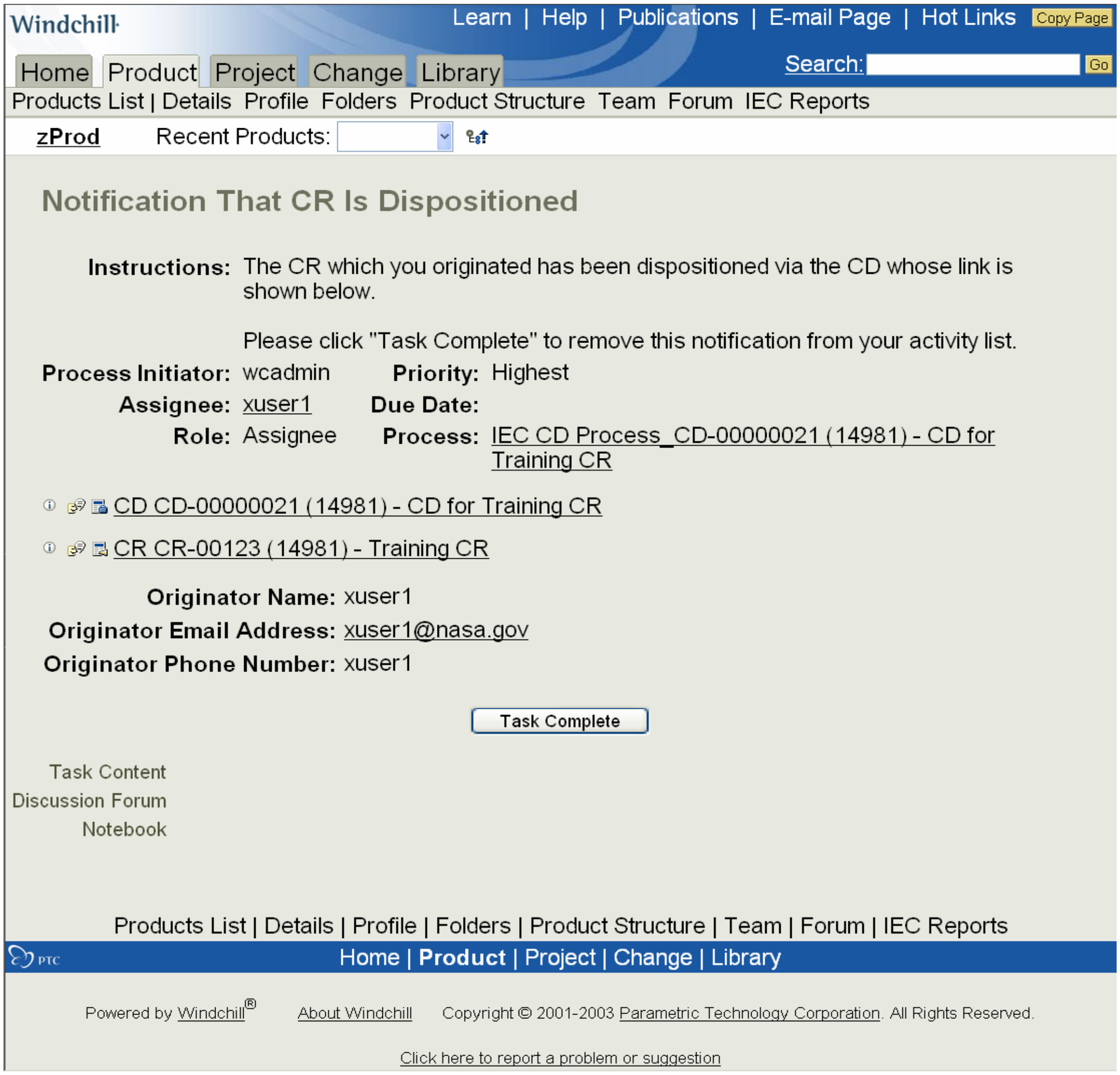


Notify Contractor that CR is Dispositioned Task Page

STEP 2: The **Contracting Authority** will notify the originator of the disposition of the Change Request/Directive. For convenience, the task page provides the Originator information (name, email address, and phone number) as entered on the CR. The Contracting Authority may choose to notify the Originator via email or use other means. The Contracting Authority may choose to attach the Contract letter using the "Task Content" link at the bottom of the task page.

STEP 3: The **Contracting Authority** will click the "Task Complete" button to complete this workflow task.

If the CR is In-house Produced, the CR Originator will receive a notification that the CR has been dispositioned. The CR Originator will click on the notification task hyperlink in the email notification OR select the "Notification that CR is Dispositioned" task from the **Home** tab, **Overview** page, **Assignments** table.



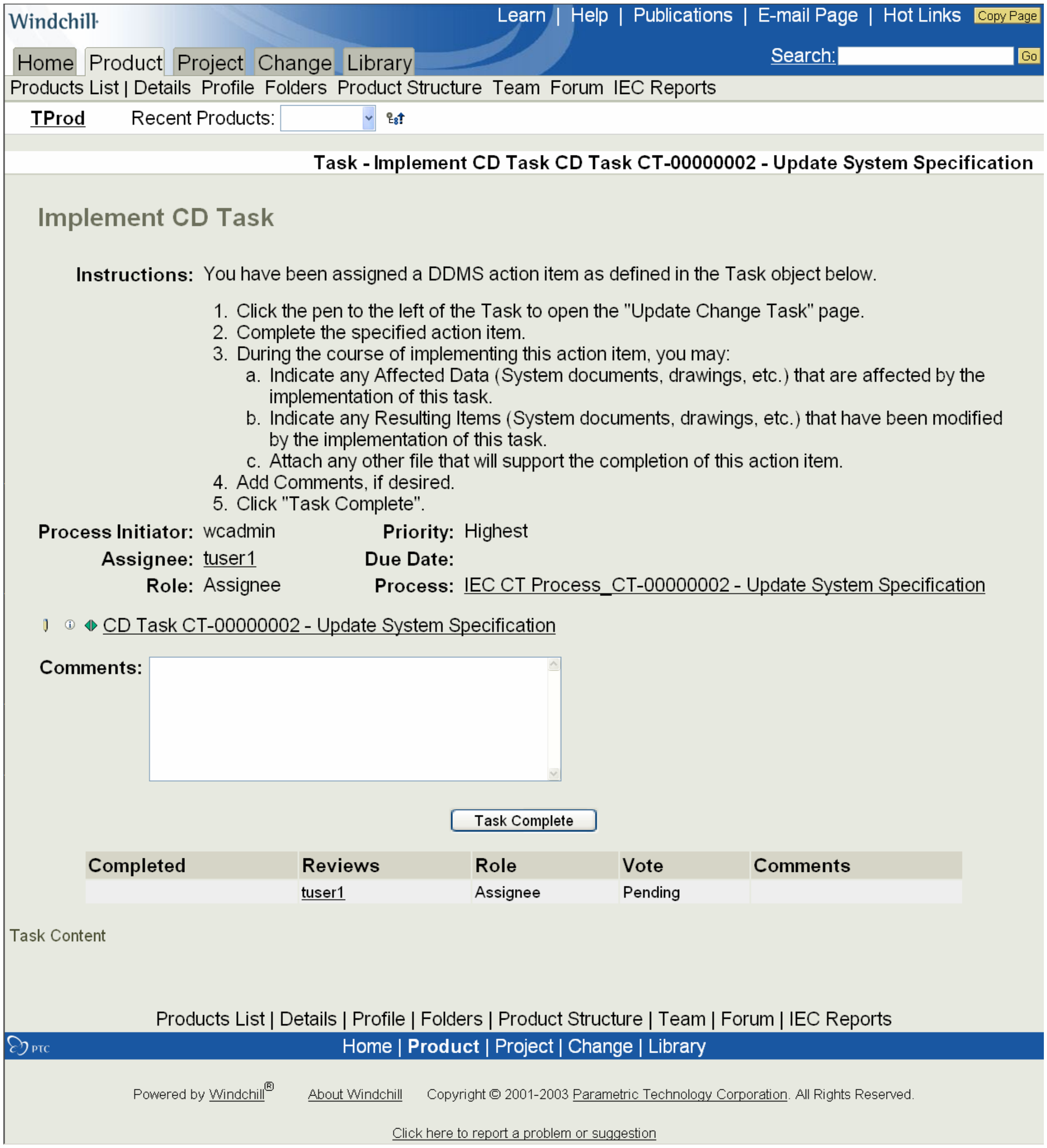
CR Originator – Notification that CR is Dispositioned Task Page

STEP 1: The **CR Originator** will click the Task Complete button to acknowledge receipt of this notification

5.2.13 Implement CD Task

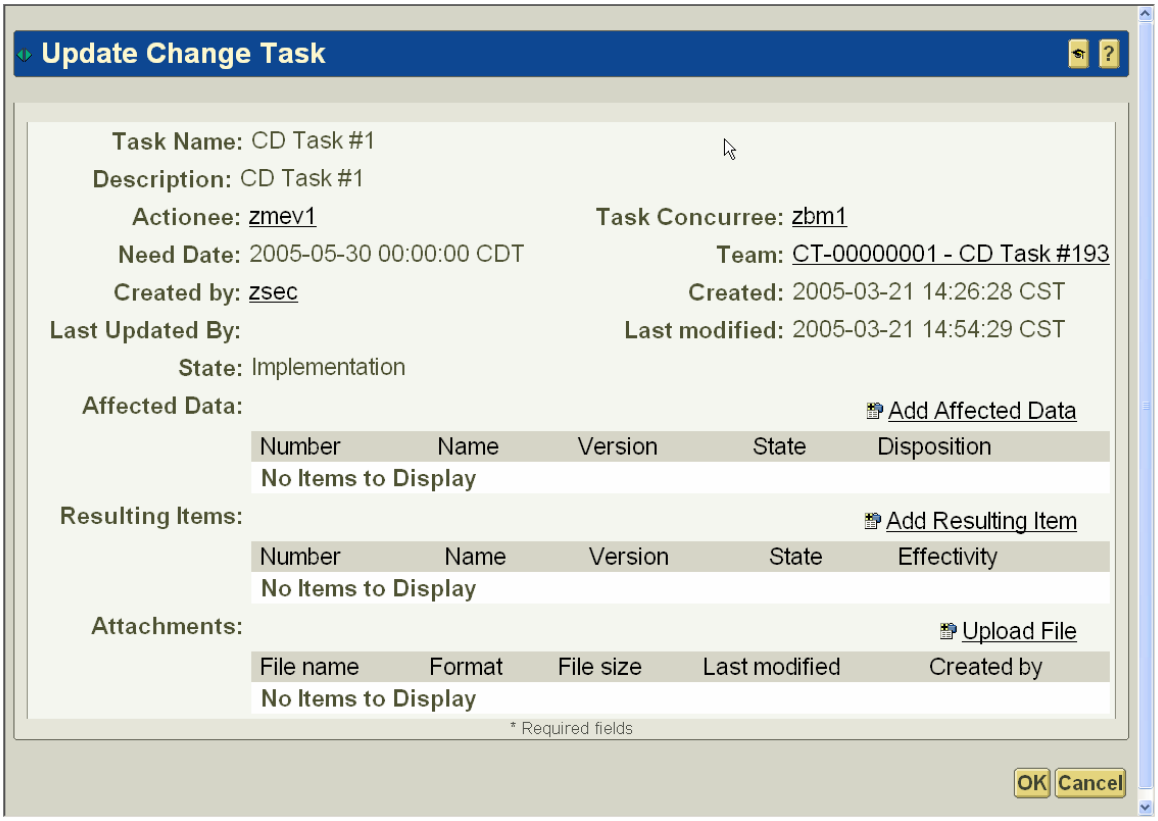
If the Board has signed the Change Directive and tasks were assigned to actionees, new workflow processes will send workflow tasks via email notification to each Change Task Actionee to begin the task implementation. New tasks will also appear in the Actionee's Assignments table under the Home tab.

STEP 1: A **Change Task Actionee** will click the Task hyperlink in the email notification OR select the "Implement CD Task" assignment from the **Home** tab, **Overview** page, **Assignments** table.



Implement Task Page

STEP 2: The **Change Task Actionee** will select the "Update Task" icon on the Implement Task window. This will launch an "Update Change Task" window. The Change Task Actionee will then complete his or her task as directed and click "OK" to submit the update.



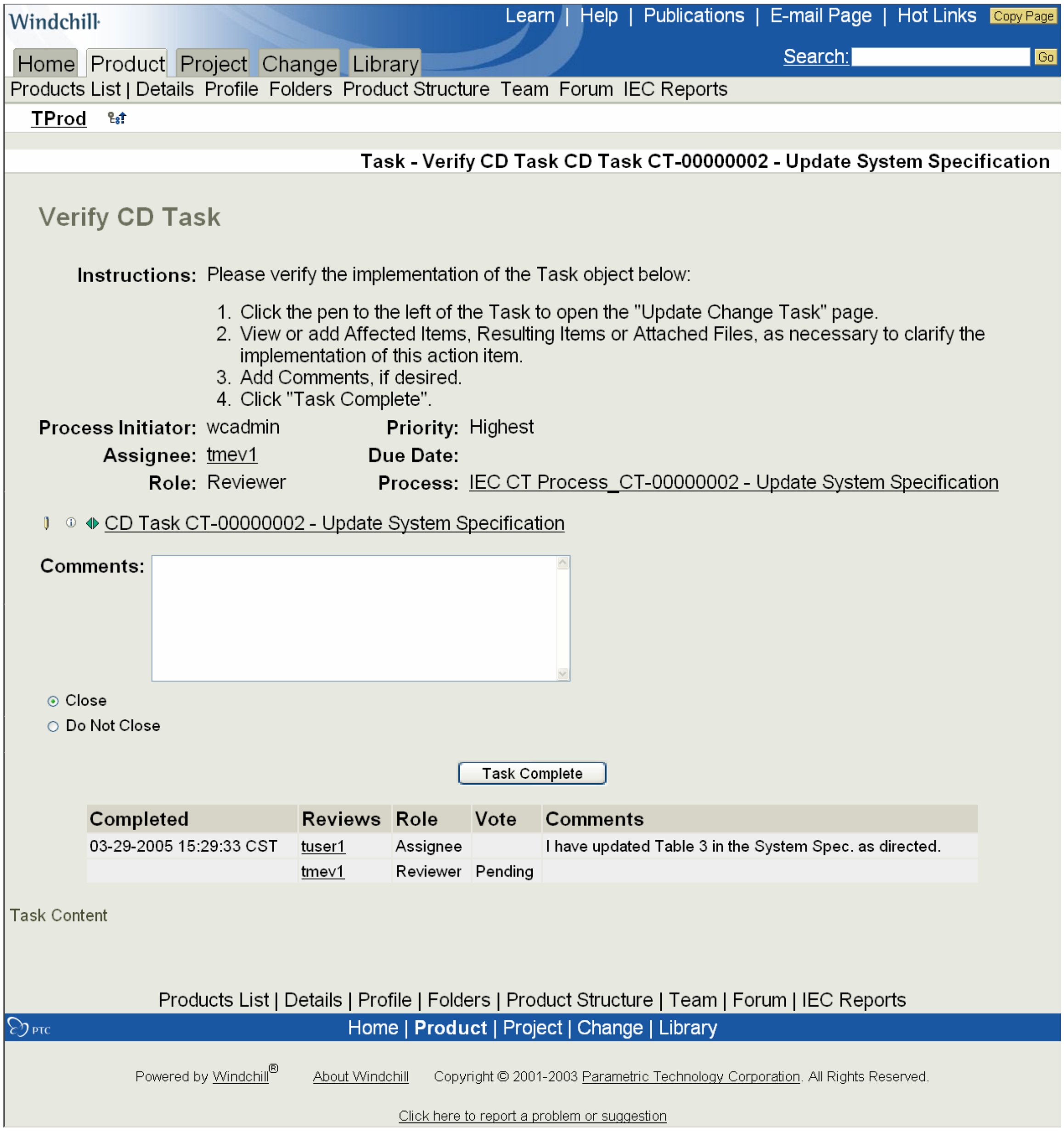
Update Task Page

STEP 3: Then the **Change Task Actionee** will then return to the Implement Task window and click the "Task Complete" button to complete the workflow task.

5.2.14 Verify CD Task

When creating Change Tasks as part of the CD, the Secretariat will specify a Task Concurree to verify the completion of each task. Each Task Concurree will receive a workflow task via email notification when the Actionee has completed the assigned task.

STEP 1: The **Task Concurree** will click the Task hyperlink in the email notification OR select the "Verify CD Task" from the **Home** tab, **Overview** page, **Assignments** table.



Verify Task Page

STEP 2: The **Task Concurree** will select the Update icon to update the Change Task or add any attachments.

STEP 3: The **Task Concurree** will return to the task page and select "Close" if the task has been implemented satisfactorily. The CR will now have a state of Closed.

STEP 4: The **Task Concurree** will click "Task Complete" to complete the workflow task. The lifecycle state of the CR is now "Closed".

5.2.15 Incorporate Changes to CR as Required

The Contracting Authority will communicate the Board's disposition of the CR to the Contractor (Contractor-Produced CR) and to other Agencies (External-Produced CR) as stated in Section 5.2.12. If the CR is In-housed Produced, the Originator will receive a notification task in his or her Assignments table under the Home tab. If the disposition was "Approved with Changes", Disapproved, or "Disapproved/Resubmit", the Creator of the CR will need to create a new Change Request in the system incorporating those changes noted in the Change Package. Important: If a CR is being "re-submitted", it is important for the CR Creator to assign the same Change Package Number in the description tab of the Create Change Request page as assigned to the previous original CR. This way the two CRs will be associated and all the supporting data can be easily referenced.

The CR Creator will also need to resubmit the CR if it is rejected by the Receipt Desk, Screening Group, or ACI Representative in the Receiving and Preliminary Reviews. The CR Comment History will contain specific details as to how the CR should be modified.

The following figure is provided to give a better understanding of the Change Management Process Flow for a Change Request. The diagram depicts the lifecycle, activities (tasks), and the User roles that are responsible to perform those tasks.

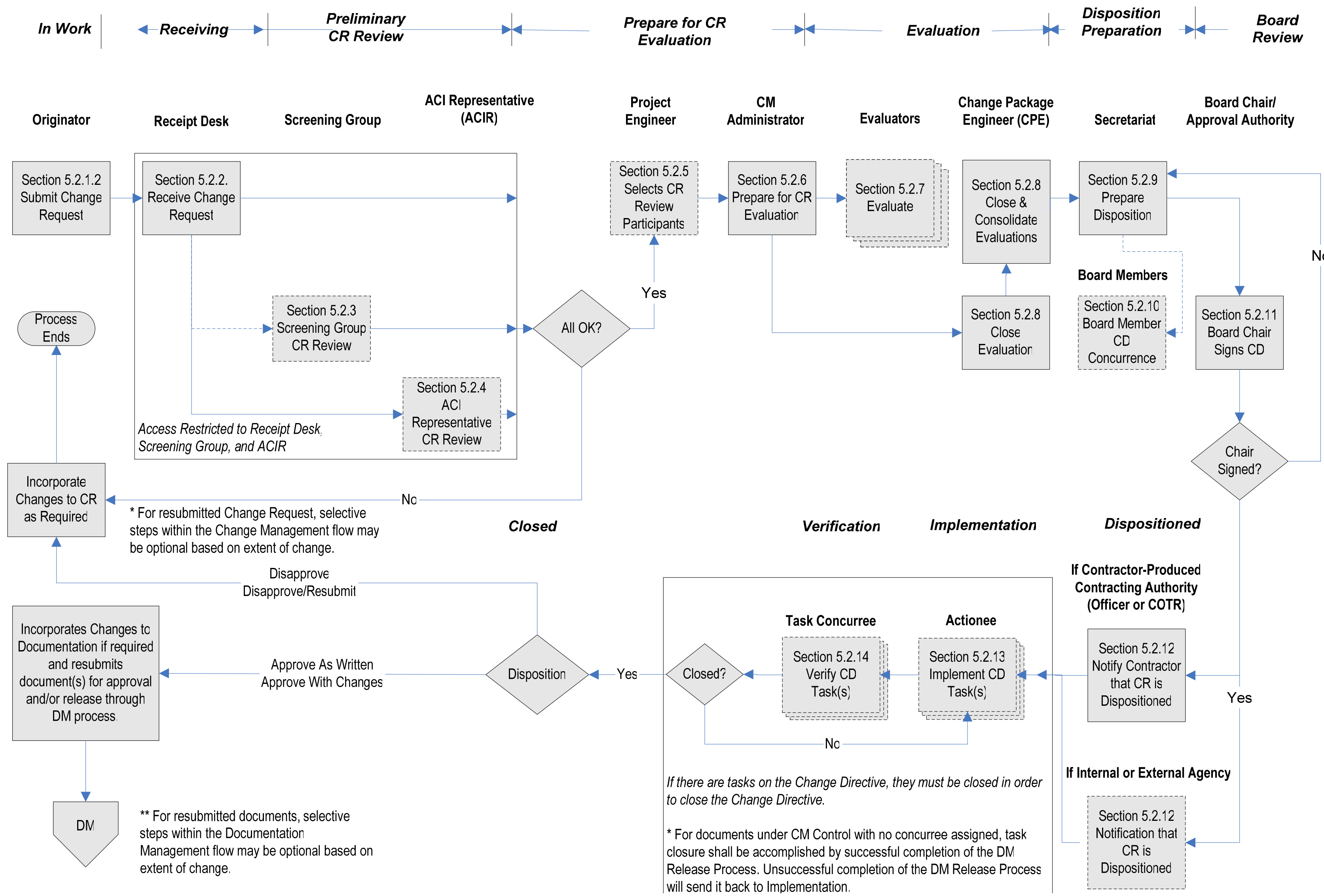


Figure 5-1 Change Management Process Flow for Change Requests
In-house, External, or Contractor-Produced CR

Module 6. Reports

6.1 Objectives

Upon completion of this module, you should be able to:

- Identify the types of reports that can be generated in the Change and Document Management Processes of the IEC DDMS
- Describe the general process for producing a report

6.2 Purpose

Reports are to be developed in order to enhance the presentation of information to DDMS users. Reports have been defined in the Change Management and Document Management requirements to extract, organize, and present data in a manner that will improve the productivity of the user requiring that data. The user may obtain reports through the Product or Project tab.

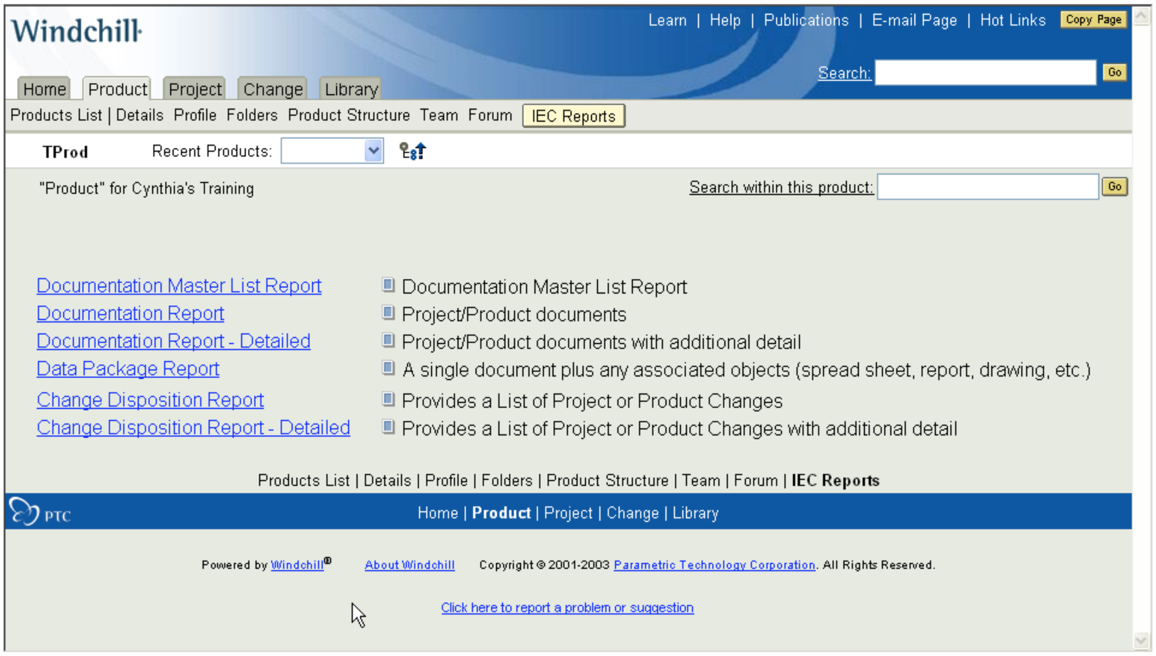
6.3 Report Types

The following are the various types of reports that can be generated to provide valuable data to the Program/Project:

- Documentation Master List Report
- Documentation Report
- Documentation Report (Detailed)
- Data Package Report
- Change Disposition Report
- Change Disposition Report (Detailed)
- Change Package Report
- Control Board Report

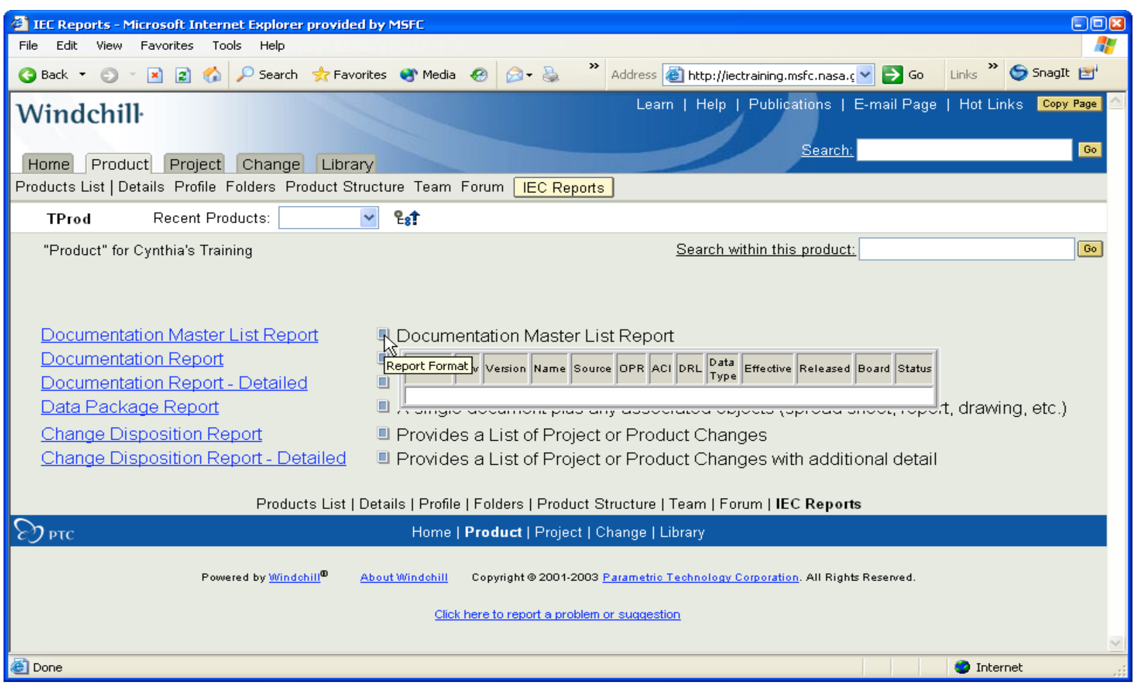
6.4 General Process for Producing a Report

From the **Product or Project** tab, **IECReports** Page, the following screen shows the available reports:



IEC Reports Page

When the user places their cursor on the icon immediately to the left of the report description, a window appears showing the report's attributes. This will allow the user to see what information the report will provide.



IEC Reports Details

The user may also be presented with the option for a Basic or Detailed report. The Detailed report will contain additional data fields.

6.4.1 Data Filtering

The Documentation Master List Report will display a fixed report, no filtering of data is allowed. The Data Package Report will prompt the user for a Package Number. Only data associated with the Package Number entered will be displayed. All other reports will display an initial default report, but will have a "Limit Search" link at the top of the report. Clicking this link will present the user with a screen to filter the data.

6.4.2 Sorting

Report data can be sorted by clicking the column header. This will make the column header the primary sort column. A number indicating the sort level will appear beside the column header. An icon (▲ or ▼) will also appear next to the column header indicating the direction of the sort, ascending or descending. Clicking the column header a second time will reverse the direction of the sort. Three levels of sorting are allowed. If there is already a primary sort column, it will become the secondary sort column when another column header is clicked. A secondary sort column will become the tertiary sort column when another column header is clicked.

6.4.3 Saving a Report

The print function of the browser works well with the reports. There are two ways to save a report:

- Use the File/Save As to save the html, which will give you the report as it originally looked.
- In Internet Explorer, the user can right-click on the table and select 'Export to Microsoft Excel' to save the data. This option is only available in Internet Explorer.

Module 7. CAD Management

7.1 Objectives

Upon completion of this module, you should be able to:

- Describe the relationship with CAD Tools, Workgroup Manager, and DDMS.
- Create User Workspaces in DDMS to store CAD Documents
- Access DDMS with the ProEngineer (Pro/E)
- Be able to Check In and Check Out CAD Documents in DDMS
- Describe Basic CAD Management Operations

7.2 Introduction

The DDMS server has increased its functionality in Release 2 for full CAD integration. This module describes this integration with the Pro/Engineer CAD tool.

7.3 Before you begin…

In order for the user to be able to integrate the Pro/E CAD tool and DDMS, certain tasks must be completed. The CAD application software must be loaded and the IEC DDMS registration process must be completed before you begin.

7.3.1 Installations

MSFC Mechanical and Electro-Mechanical CAD applications are supported by the Integrated Engineering Services (IES) group. To request CAD application software loads or to report problems with CAD applications, submit an Engineering Service Requests (ESR) via the IES website http://www.ies.msfc.nasa.gov/ies/.

This site also contains helpful information for using Pro/E. In addition, users can access information on Pro/E training events and information on joining Parametric Technology Corporation University (PTCU) which provides users with self-paced online training classes. Contact 256-544-3429 to acquire an account for PTCU.

7.3.2 DDMS User Registration – CAD Users

Please refer to Module 3 General User Information, Section 3.2 for the DDMS registration process.

7.4 Definitions

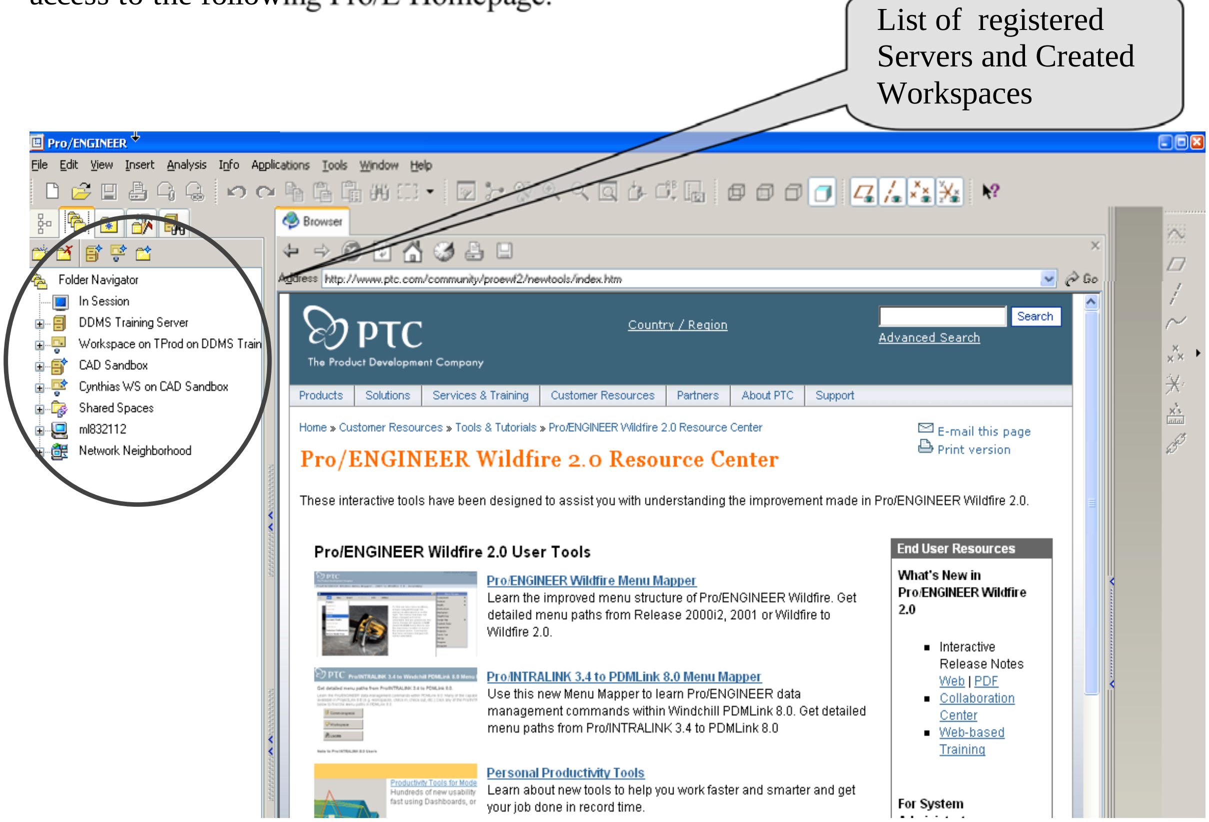
CAD Document - a special kind of document that contains a file or a set of files created by a CAD application such as Pro/E.

Workgroup Manager – the application that captures information from engineering documents and imports that information into DDMS, thereby, creating a link between DDMS and the CAD tool for the lifetime of the document. The workgroup managers manage the bidirectional flow of information between DDMS and the CAD tool.

Workspace – a private area in DDMS for managing CAD files while working on a task. A workspace allows you to perform basic data management on all objects in session. A workspace consists of a local cache directory and a private folder in a Product/Project in which it resides You can have several workspaces on a server.

7.5 General Overview – CAD Management

After the Pro/E CAD application has been loaded on your computer, the user will have access to the following Pro/E Homepage:



Pro/E Homepage

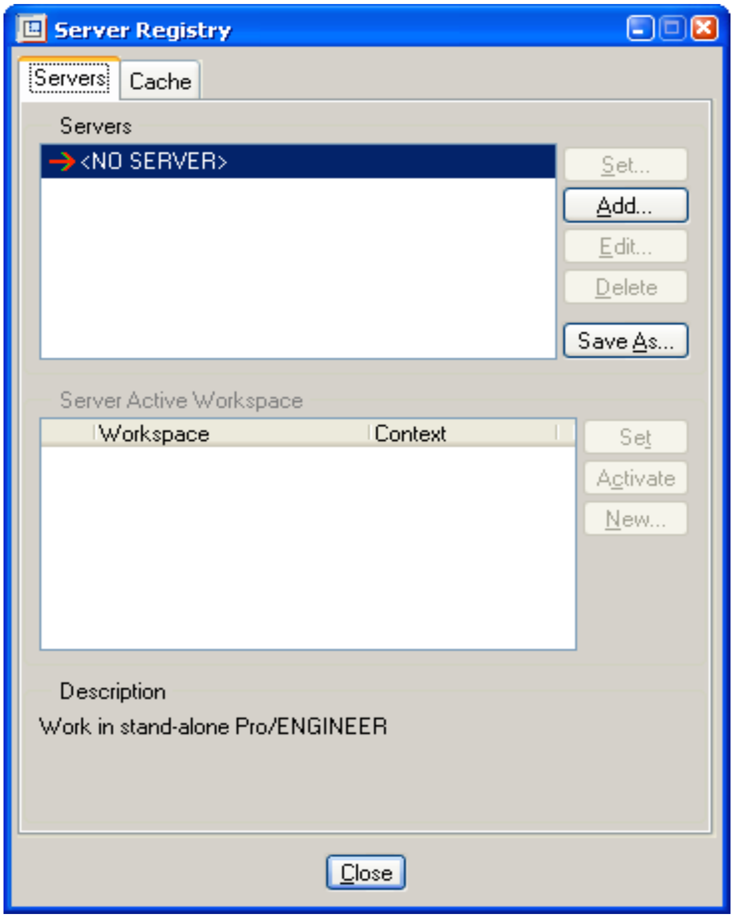
Users work within the CAD tool and then store CAD Documents in DDMS.

7.5.1 Registering CAD Tools with DDMS

The Pro/E CAD tool is capable of functioning within DDMS. The user must establish a connection by registering the DDMS server in Pro/E. Server connections are primarily handled through the **Server Registry** dialogue box. The dialogue box allows you to do the following:

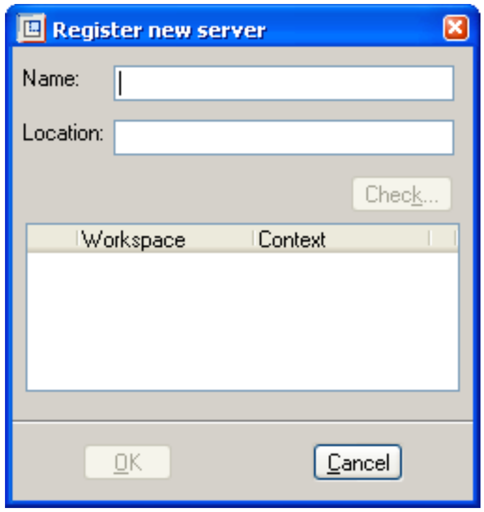
- Register a server with Pro/E
- Designate a primary server
- Remove old or out-of-date server connections
- Designate an active workspace

STEP 1: To access the **Server Registry** dialogue box, click **Tools > Server Registry** as shown below:



Server Registry Window

STEP 2: Click on **Add** and enter the name of the server and the location in the "Register new Server" window shown below. It is recommended to have **IEC DDMS** as the name of the server. Click "Check" to verify the web address is complete and valid. Click OK.



Register New Server Window

STEP 3: Once the Server has been verified, enter the DDMS user name and password in the **Authentication** dialogue box.

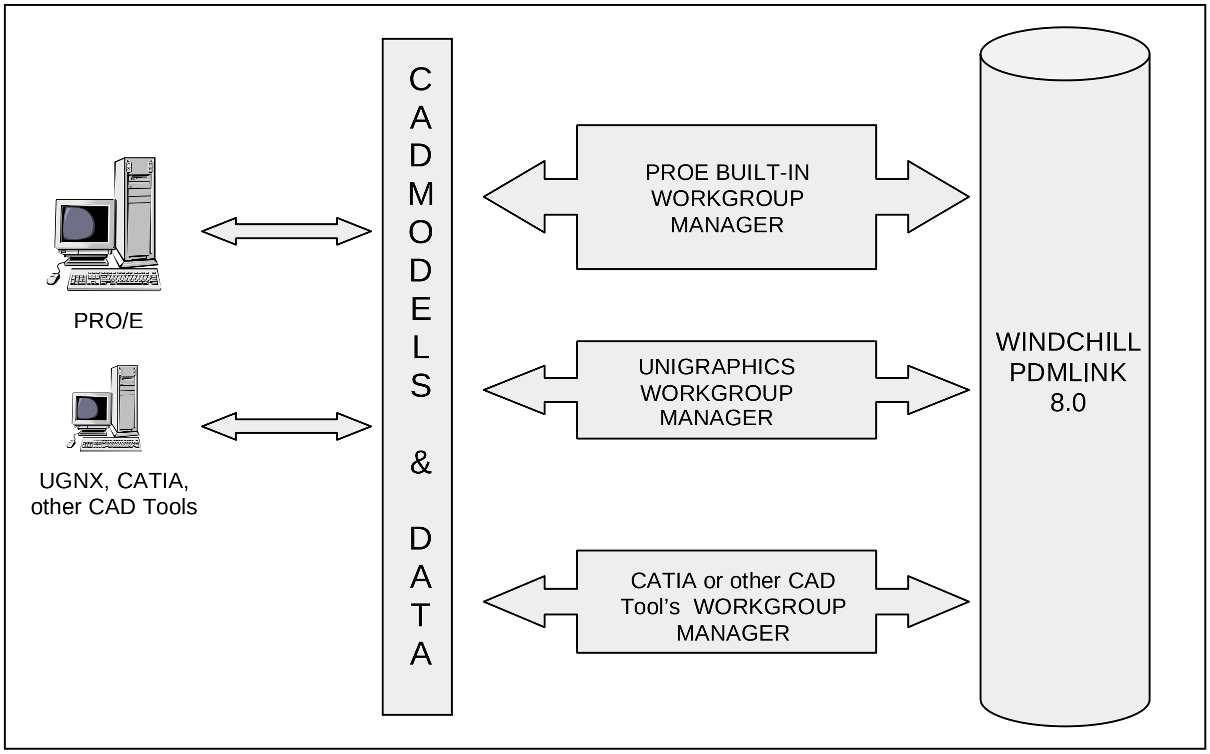
DDMS Authentication Dialogue box

STEP 4: To set a particular server as the primary server, select the Server name in the Server Registry window and then click on "Set". Click Close.

7.6 DDMS User Interface to CAD Tools – Workgroup Manager

The Workgroup Manager extends DDMS capabilities into the engineering desktop and allows DDMS to understand CAD data. There is a bidirectional data transfer between the CAD system and DDMS. This includes basic check-in, checkout, upload, and download of data from DDMS. Attribute information is also exchanged between the CAD tool and

DDMS. CAD engineers do not have to leave their CAD tool to access DDMS. Menus are embedded directly into the CAD system. DDMS supports native design information, including parts, assemblies, drawings, and their dependencies. Bill of material (BOM) information is extracted from the CAD system and maintained in DDMS. Primary and secondary design data can be associated to a product structure or part.



Workgroup Manager Interface with CAD Tools and DDMS

7.6.1 User Preferences - CAD Management

Similar to the way users customized their view of DDMS, as described in Module 3 Section 3.4.1, users may also customize certain aspects of the functionality between DDMS and the CAD tool. The user should navigate to the **Home** tab, **Utilities** page and select **Preferences**. The following preferences must be indicated to enable complete functionality:

– **CAD Workspace** – (Enables the CAD Workspace) - **Display** Tab - The user should check the box to enable CAD Workspaces. The system default is that the workspace is not enabled. However, if the user is working from Pro/E, this preference selection is not necessary.
– **Select Viewing Tool** – (Choose either ProductView Standard Edition or ProductView Lite Edition as the Viewing tool) – **Visualization** Tab - Choose whether ProductView Standard Edition is to be used as the default Visualization client. ProductView Lite Edition is the default.
– **Visualization Collection** – (Enable Visualization Collection for use with ProductView) – **Visualization Tab** - The user should choose whether to

make the Visualization Collection available for use. The Visualization Collection allows DDMS items to be copied to ProductView.

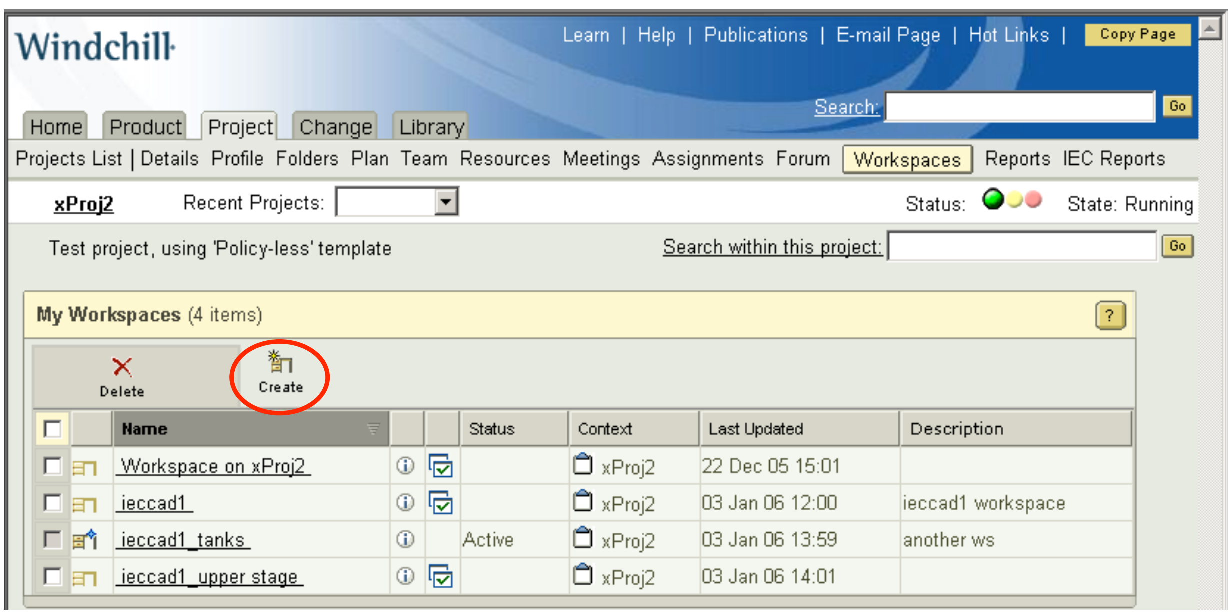
7.6.2 Workspaces

The DDMS server provides users with a holding area for in-work information such as CAD models, iteration and version information, and configuration. This area is called the "Workspace". A "Workspace" allows the designer to track and change multiple objects and perform data management operations from within the Pro/E user interface. The benefit of a "Workspace" is its ability to hold data as well as to better organize your data.

NOTE: Server Workspaces will automatically be listed once the server has been verified. Additional Workspaces can be created to give the user the ability to separate work..

7.6.2.1 Creating a Workspace

STEP 1: While in the Pro/E CAD Tool, the user should navigate to the **Project** Tab, **Workspace** Page of DDMS and click on the **Create Workspace** icon as shown below:



Create Workspace Icon

STEP 2: Enter the Name, Description, and Context of the Workspace to be created and click OK. You will receive a confirmation message that the new workspace has been created.

Once the workspace as been created, it will be listed in the Workspace table as an inactive Workspace. In Pro/E, you set which workspace is your active workspace. To

begin working in a particular workspace, click on the link in the table then the contents of the Workspace can be viewed.
Workspaces may also be created from the **Server Registry** window, users can add workspaces by using the following commands:

- **Set -** Activate a workspace and make the server to which it belongs primary.
- **Activate -** Activate a workspace on a secondary server.
- **New -** Create a new workspace on the primary server.

Workspaces created from the Server Registry automatically become the active workspace.

NOTE: Switching workspaces on the same server requires items in memory (Pro/E session) to be erased. Only one workspace can be active at any one time.

7.6.2.2 User Preferences - Workspaces

Workspaces can be configured for your convenience. Typical reasons to set workspace preferences are to provide common attribute sets (such as team or life cycle), identify storage folders, and specify configuration options for all items managed in a workspace.

7.6.2.3 Deleting a Workspace

Only inactive Workspaces can be deleted. To delete a Workspace, the user should click on the checkbox to the left of the Workspace and then click Delete. This operation not a only deletes the Workspace, but also deletes the cache. Therefore, a workspace that contains checked-out items cannot be deleted even if it is an inactive Workspace. You must first check in the items or undo the checkout to the workspace before deleting. After the workspace is deleted, the user should remove the items from the workspace as described in section 7.6.4.

7.6.2.4 Workspace Menus

There are three menu actions primarily used that enable the user to perform certain actions within a workspace. They are located across the top menu bar of the Pro/E Toolbar. They are as follows:

- <u>File</u> – contains actions for creating new objects, managing objects, and transferring data.
- <u>Edit</u> – contains actions for revising objects, associating objects, and workspace preferences.
- <u>View</u> – contains actions for filtering your workspace view and managing column display.

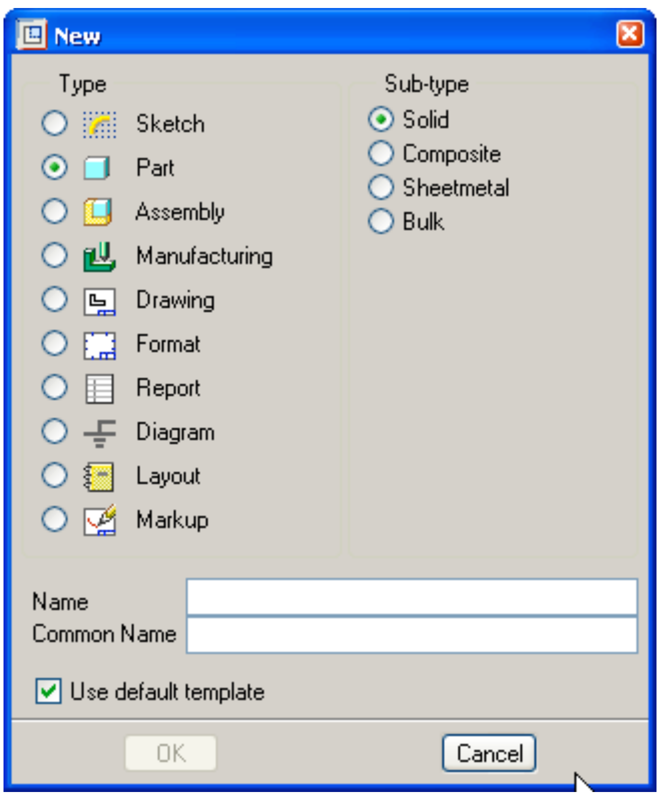
There is also a Workspace toolbar that contains the most commonly used workspace functions. Users may simply click convenient icons (as shown below) to perform these common functions.

Workspace Menu Bar

7.6.3 Creating a CAD Document

The user will create CAD documents from the Pro/E CAD tool as follows:

STEP 1: Click on **File>New.** The following window will pop up and the user will identify the type of CAD Document and name the document.



Name is the file name of the CAD model when stored in DDMS. Name maps to the CAD content name and CAD Document Number.

Common Name is a common description of the CAD model. Common Name maps to the CAD document in DDMS.

Create CAD Document Naming Dialogue Box

STEP 2: After the document is identified, click OK. Now the user is ready to create the CAD model. Once the model is ready to be viewed and/or updated by the rest of the Project team, the user will check in the model into the DDMS workspace. Only CAD documents that are checked in can be viewed and updated by other team members.

7.6.3.1 CAD Document Check In and Check Out

When the user is ready to store an item in DDMS, a Check-in operation must be performed. The system will assign the item an iteration and make it available to other DDMS users to view or check-out into their Workspaces. There are two ways to Check-in an item:

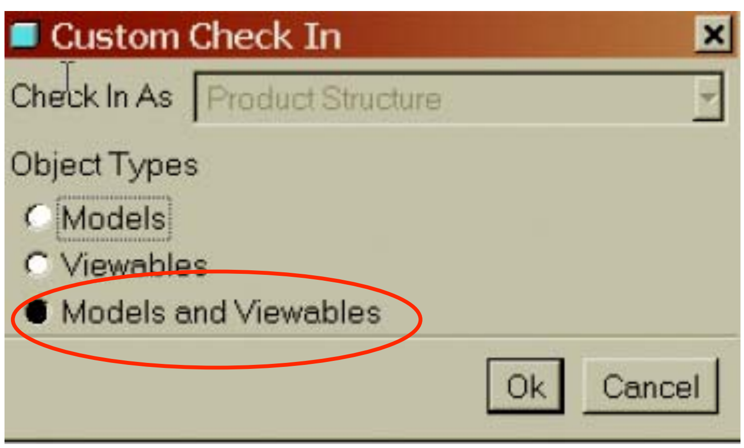
– Auto Check-in - Checks in items from your current Pro/E session to the DDMS server using default values that you can set in your workspace preferences.
– Custom Check-in – Enables you to check or change default settings and also provides additional options during check-in. The custom method is available from both the Pro/E and Workspace menus.

NOTE: The basic difference between upload and check-in is the accessibility of the data. Uploaded data can be viewed by other users. Only Checked-in data is accessible to other users.

7.6.3.1.1 CAD Document Check In

STEP 1: In an active Pro/E session, click **File** > **Check In** > **Custom Check In**. The name of the file appears in the Model Name field of the Save Object dialogue box.

STEP 2: Click OK. The Custom Check In dialogue box opens and the user will indicate exactly what is to be checked in (Recommended: Models and Viewables)



Custom Check In Dialogue Box

The “Check In” operation uploads the modified design to the DDMS server and unlocks the object on the server allowing other users to access and modify the design further. A new iteration is created with every check in. The process of checking out and checking in (locking and unlocking) data helps the engineer to maintain data integrity.

On the **Check-In** page, make selections for the following options in the table header:

- **Location** - Checks in objects to a specific folder or cabinet location on the PDM server. Additionally, you can use the **New Folder** option to create a new folder. (See Folder Creation – Section 3.3.5)
- **Include Drawings** - Includes or excludes any parent drawings that reference the object that you are checking in.
- **Include Parts or Documents** - Includes or excludes any parts or document files that are associated with the object that you are checking in.
- **Keep Checked-Out** - Checks in the contents of the selected object to the PDM server and immediately checks out the object to your workspace. This option refreshes the data on the PDM server with the latest version of the object, this allows you to continue to modify the object and lets other PDM users reference the latest design modifications on the PDM server.
- **Include/Exclude** - Includes or excludes any parts or documents associated with the check-in object. You can use the **Include/Exclude** option to add or block specific objects from being checked in.
- **Remove –** Erase the object after Check In

7.6.3.1.2 CAD Document Check Out

After a CAD Document has been successfully checked in to the DDMS Workspace. All team members that have been given access to project data can view and update the document. The document must be checked out in order to be updated. The check out process is as follows:

STEP 1: From DDMS**, Project** Tab>**Folder**s page, click on **See Actions** to the right of the CAD document to be checked out. Select **Checkout**.

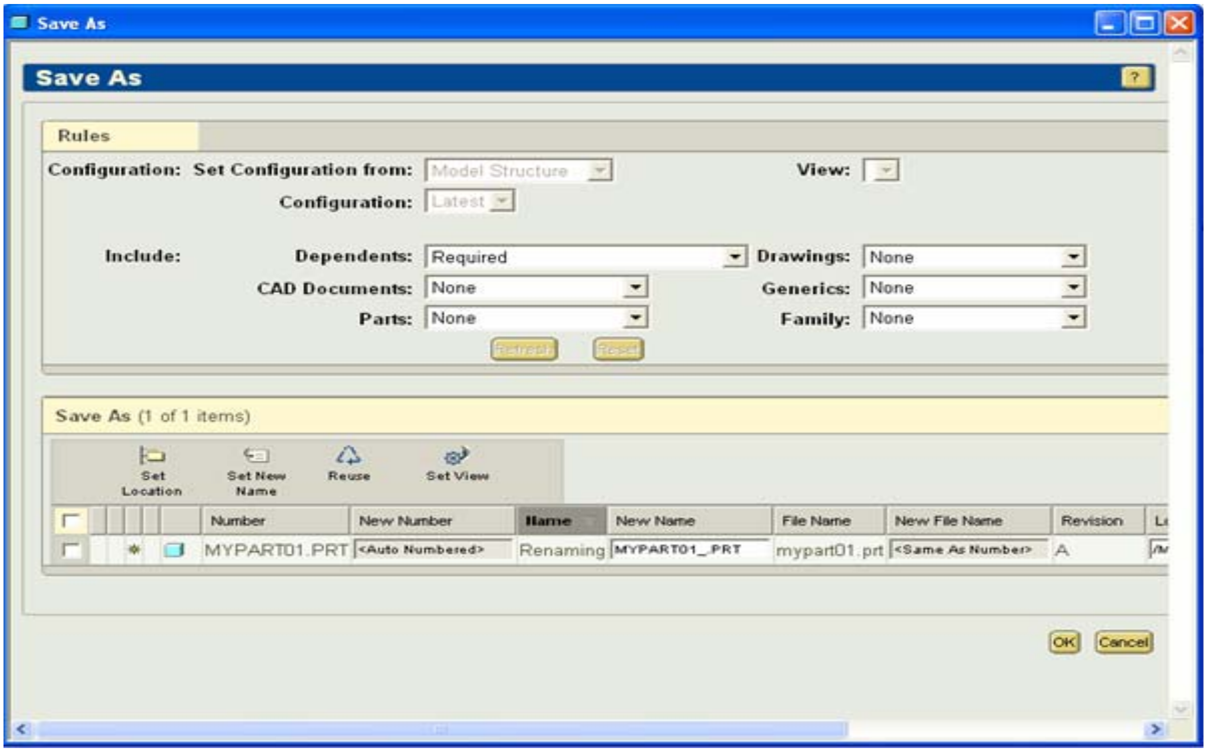
STEP 2: Once the document has been checked out, select **Open in Pro/E** to begin updates. Once all updates are completed within Pro/E, check in the document and follow the Check In process as stated above.

NOTE: Once a document has been checked in using Custom Check In, Auto Check In may be used in all subsequent check in operations.

7.6.4 Other Basic CAD Management Operations

Many CAD Data Management actions are accessible from both the Pro/E and the Workspace menus. Below is a list of the most common ones:

- Save As and Renaming - This option allows you to copy a CAD document to a new name. The command allows the copied document to be stored in another folder on the server. Assemblies can also be copied using this command. When copying assemblies, the user has the option of renaming all component parts as well as the top level assembly. The Save As screen is shown below.



CAD Document "Save As" Dialogue Box

– Uploading Objects – Objects can be uploaded using the Workspace or Pro/E. If using Pro/E, the upload command is initiated by selecting File>Save and Upload. The system will upload the object to the user's personal server and ensure the user that the upload was successful. If the user is performing the upload from the Workspace, select **File>Upload**.
– Delete - The creator of a CAD document can delete his/her documents by selecting the document and then click on **Delete**. Only the administrator is able to delete documents created by others.
– Remove – CAD Documents can be removed from the workspace by simply selecting the box to the left of the CAD Document and then selecting the **Remove** icon from the Workspace menu bar.
– Undo Checkout – The user can check in a document without creating a new iteration. This action can be selected from the document's "See Actions" list. This is commonly used if the document was accidentally checked out or if the document was checked out and no updates were needed.

Acronyms

ACI – Administratively Controlled Information
ACIR – ACI Representative
AFS – Agency Filing Scheme
BOM – Bill of Materials
CAD – Computer Aided Design
CAGE – Commercial and Government Entity
CCB – Configuration Control Board
CD – Change Directive
CDM – Configuration and Data Management
CE – Change Evaluation
CI – Configuration Item
CIMS – Cyber Identity Management System
CM – Configuration Management
COTR – Contracting Officers Technical Representative
COTS – Commercial off the Shelf
CPN – Change Package Number
CR – Change Request
CPE – Change Package Engineer
DCB – Document Control Board
DDMS- Design and Data Management System
EAR – Export Administration Regulations
ED – Engineering Directorate
DM – Data Management
DPE – Data Package Engineer
DRD – Data Requirements Document
DRL – Data Requirements List
ICMS – Integrated Configuration Management System
IDMS – Identity Management System
IDRD – In-house Data Requirements Document
IEC - Integrated Engineering Capability
ITAR – International Traffic in Arms Regulation
MRB – Materials Review Board
MSFC – Marshall Space Flight Center
NAMS – NASA Account Management System
NARA – National Archives and Records Administration
NISE – NASA Integrated Services Environment
NPR – NASA Procedural Requirement
OPR – Office of Primary Responsibility
OPRD – OPR Designee
PCB – Program or Project Control Board
PCN – Program Control Number
PDM – Product Data Management
Pro/E – Pro Engineer
PTC – Parametric Technologies Corporation

UAMS - Unified Account Management System
WBS – Work Breakdown Structure